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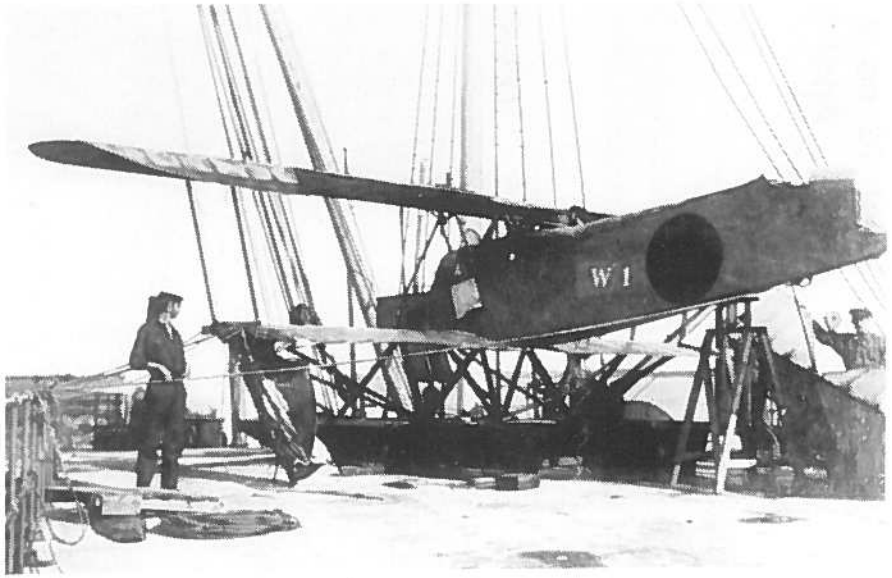


DUTCH FLOATPLANE: VAN BERKEL WA
BELGIAN AIR FORCE BETWEEN THE WARS
SADAT'S AIR FORCE
YUGOSLAV LIGHTNING
THE AIRCRAFT OF RUDOLF FIZIR
LATIN-AMERICAN AIR FORCE EMBLEMS

vol. 15 no. 2 (58) April 1991



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SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House

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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching the history of aviation on all aspects of aviation, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material.

SUBSCRIPTION RATE: Subscription to the current volume of the SAFO is US $9.00 for 4 issues per year in the USA and $10.00 elsewhere via surface mail. For air mail delivery. add $8.00 for Europe and Latin America or $11.00 for Asia, African, and Australia. Payment should be made in cash, by International Money Order, or by a check from a bank with a subsidiary in the US. (There's a $25 charge to cash a check from a bank without a US subsidiary.) New subscriptions begin with all issues of the volume current at the time payment is received; if you desire otherwise, please specify with your payment which issues are desired. Send remittance to Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923 USA. You can also have your bank transfer money directly to my bank: Routing #3220-7021-3; Coast Savings & Loan, 137 Carmel Valley, 27845 Berwick Dr., Carmel, CA 93923; Credit to James V. Sanders, Account #03105350.

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SPONSORSHIP PROGRAM: To keep the SAFCH truly international, our Sponsorship Program allows persons who can not obtain US currency to receive the SAFO. Any SAFCH member interested in sponsoring a SAFO subscription for a person in Eastern Europe (or other country where it is impossible or difficult to obtain US currency) should write to the editorial office for a list of persons seeking sponsors. If you would like to receive the SAFO but can not obtain US currency, a list of SAFCH members looking for someone to sponsor is also available from the editorial office.

INFORMATION FOR AUTHORS: Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any prints returned and if you do not want them to be cut, please, mark "Return" and "Do not crop" on the back of the print. All art work must be ready for printing. It is best to plan for the art to be reduced to 75% in printing and the finished drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

SAFO is distributed in England by Midland Counties Publications, 24 The Hollow, Earl Shilton, Leicester LE9 7NA; and in the USA by Bill Dean Books, 166-41 Powells Cove Blvd., Whitestone, NY 11357. Additional distributors in both of these countries and in other countries would be most welcome.

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LOST MEMBERS: Anyone knowing the whereabouts of the following 'lost' SAFCH members please inform the editorial office (last know address included): Bruno Dauzie, 1 rue des M. de Chateaubriand, 94490 Ormesson, France. Alain La Pierre, PO Box 2102 2102A, Les Delicias, Maracay, Venezuela. Michael Parr, #124 101 Tabor Blvd., Prince George, B.C. Canada V2M 6Y1. Barry Numerick, 600 Grant St., Pittsburgh, PA.

GUEST EDITORIAL: The manuscript for my book on Central American and Caribbean Air Forces was submitted to a well-known publisher (not Aerofax) who, at first, appeared interested. When I told him that I was having serious troubles trying to cover all the air arms in the region in one book, his initial response was "not to worry, we'll simply go into subsequent volumes and cover them in sequence". Thus assured, I hired-on an artist to do the color drawings (16 at $100 each) for the first volume. When I next talked to the publisher, he said that he was having a "hard time selling even one volume to the management".

This brings me to the subject that I've discussed in several letters: support for such undertakings. I know there is interest in these subjects. I've recently given slide presentations at several local gatherings of aviation "buffs" and the reception was very gratifying, to say the least. I conclude from this, and from the very considerable volume of mail I receive whenever I publish something, that there is a substantial body of interest in these subjects.

Unfortunately, most publishers do not concur. They'll risk a $29.85 tag on a book on leather flight jackets or yet another Luftwaffe Bf-109 book, rather than do a modestly priced book on the P-47 in Latin America. Fortunately, Phalanx Publishing is interested in the P-47 book, but they need assurance that the thing will sell.

The above are only two examples. I've got lots of projects on the burner that I feel would be of great interest to our readers and to enthusiasts worldwide. But, part of the process is convincing publishers that a substantial market exists out there.

I know I'm preaching to the choir, but what I'm attempting to communicate is that, if reader want things like the P-47 book, they must communicate this desire to potential publishers. When you write, encourage them, do not chastise, with the aim of reinforcing their market research. A few firms that have taken a chance on SAFO-style products, but who need reinforcement, include: Aerofax, PO Box 200006, Arlington, TX 76006; Phalanx Publishing, Attn: Jack Lambert, 1051 Marie Ave., St. Paul, MN 55118; and Midland Counties Publications, 24 The Hollow, Earl Shilton, Leicester LE9 7NA, England. There may be others which with our readers are acquainted.

I hope that a flood of letters from SAFO members will help bring about more diversification in the publication of aviation history.

Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 22020-0682.

SAFCH 1991 KIT SURVEY: At the time of this writing (6 April 1991) 34 responses have been received nominating 220 aircraft. The top vote getters are: Fokker C-V, Breguet 19, IAR-80, Poetz 25, and PWS-10. Entries are still arriving, so a final report can not appear until the next SAFO.

COVER COMMENTS: Van Berkel WA being manhandled onto the beach. The story of this Dutch floatplane begins on page 41. (Photo: Royal Netherlands Air Force.)

AUSTRALIA

AUSTRALIAN PLASTIC MODELLER'S ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A$27; air mail A$30).
4/90 (28 pages) "RAN Sycamores" 3 pages including one photo, 2 side-view drawings, and table. "Les Pedro's" 3 pages on modeling the CASA 2.111 (Spanish He-111) including 2 side-view drawings. "NSCA: VH-NSS" 3 pages on the NSCA's Super King Air including 2 photos and 2 side-view drawings. "Blackhawk Briefing" 6 pages on RAAF UH-60 including 5 photos and a 2-page 5-view drawing. "Tracker Extra" 5 pages including 5 photos and one-page sketch of instrument panels.

NEWS AND VIEWS (IPMS NEW SOUTH WALES, PO Box 637, Broadway, NSW 2007; 4 issues A$25.00 surface or A$30.00 air mail).
4/90 (28 pages) "MiG Manifesto" 7 pages including 14 side-view drawings of MiG-17s [Albania, Angola, Madagascar, Nigeria, Indonesia, Vietnam, Egypt (3), Cambodia, Syria (2), East Germany] and a sketch page which includes details on correcting the wings on both the Hasegawa and KP kits. "Sukhoi Su25/28 Update" 6 pages including scale side-view drawings of 3 variants, a sketch page, and six side-view drawings [Iraq and Czech (3)].

AUSTRIA

OFH NACHRICHTEN (Oesterrichishe Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien).
4/90 (32 pages) "Osterreichische Piloten im Spanischen Burgerkrieg" 5 pages including 3 photos (one crashed Chato). "De Havilland DH-60GIII" 4 pages including one photo, one side-view drawings 'OE-TAT', and map of flight from Croydon (England) to Wien. "Die Grossflugboote der KUK Marine: 1. Teil" 6 pages including 1/72-scale side and front views of Grossflugboote G-2. "Focke-Wulf Fw 58B-2 Beihe in Osterreich" 2 pages including one photo '303' and s/n list.

BELGIUM

KIT (IPMS Belgium, Te Couwelaarlei 103 bus 21, B-1200 Deurne/Antwerp; 4 issues for US$ 13.00, add $3.00 for airmail, no personal checks accepted). One subscription is available from SAFCH $10.00.
#79 Autumn 1990 (40 pages) "Meteor T.Mk.7 in Belgian Service" 18 pages including 3 color photos, 16 b&w photos, 4 pages of drawings (4 a/c), and individual a/c histories. "Modeling and Updating Monogram's 1/48 Grumman Panther" 6 pages including 3 pages of scale drawings and 2 sketch pages. "Belgian Military Aviation during the Phoney Way 1939-40: Part 1" 4 pages including 4 photos (FK-56 & Oxford).

BRAZIL

EM ESCALA (IPMS Brazil, Rua Arquias Cordeiro, 316 S/502, CEP 20770, Meier, RJ. Subscription is $7.00, but they prefer kits or accessories. Send to Antonio Pereira Linhares at the above address.)
3-4/90 (28 pages) "FAB Markings and Insignia Dimensions (1955-1974)" one page.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US $16.00 in US $18.00 elsewhere).
21/2 (24 pages) "Piasecki/Vertol H-21" 13 pages including 18 photos, sketches, and 3 side-view drawings.

DENMARK

NYT (IPMS Denmark, c/o Bjorn Jensen, Rosenvaegets Alle 6, 2100 Kobenhavn 0; 4 issues for 90 Dkr surface, 100 Dkr airmail).
#49 (30 pages) "RDAF Heraldry; Part 3" 2 page with 5 squadron badges illustrated and described and 2 photos (SAAB 17 & Hughes OH-6). "RDAF Lynx" 4 pages including 3 photos and one drawing. "Modeling Danish Meteors" 3 pages including drawing of TT Mk.20. "Danish Air Museums" one page on 2 new museums including photo of Dancok '158'.
#50 (30 pages) "Flyvevabnets Heraldik 4" 2 pages including one photos and 3 squadron insignia. [Editor's note: To commemorate its 25th anniversary, IPMS-Denmark is producing a decals sheet on RDAF unit crests in 1/72 scale. Contact Per Voetmann, Mejsebo 5, 2665 Vallensbaek Strand, Denmark.]

ENGLAND

MAGAZINE (Neil Robertson, 16 Green St., Greasbrough, Rotherham, South Yorkshire, S61 4EF, 6 issues for £12.00. US subscription agent: Wise Owl Publications, 4314 West 238th St., Torrance, CA 90505; $22.00)
6/90 "Mil Mi-24 Hind" 5 pages including 10 photos (Soviet & Polish). "Magyar Kiralyi Hanved Legiero" 4 pages including 18 side-view drawings. "Fairey's Gannet" 4 pages including 4 photos and 6 side-view drawings (one RAN). "'In the Pink' Operation Granby" 4 pages including 2 photos and 3 side-view drawings of RAF aircraft in the Gulf, and 4 photos of Saudi Arabian aircraft.

PLASTIC KIT CONSTRUCTOR (PAMAG (Publications) Ltd., Unit 308, J.C. Albyn Complex, Burton Rd., Sheffield S3 8BZ; 4 issues £ 17. In USA: J.J. Daileda, 4314 West 238th St., Torrance, CA 90505; 4 issues $18.00).
#26 (24 pages) "Mustang X" one-page conversion article. "RNethAF F-16A Display Aircraft" one-page drawing. "Fairey Fawn" 2-page scratch building article including 1/72-scale 3-view drawing. "C450 Coleoptere" 2-pages on building the Hi-Tech kit. "A-12 Avenger II" one-page 3-view drawing. "The Famous Stormovik Il-2" 3 pages including 4 photos and a 2-page 1/72-scale drawing. Lot of kit reviews.

FINLAND

MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues $20.00, add $1.00 for airmail and $1.50 for cashing personal check).
3/90 (20 pages) "MiG-29 Fulcrum A" 14 pages including 20 photos (Soviet a/c) and 6 pages of 1/72-scale drawings of prototype, five variants of the A version, and the 2-seater.

GERMANY

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).
1/91 (30 pages) Nothing of small-air-force interest.

GREECE

NEA (IPMS-Greece, PO Box 79167, 175 05 Amfithea, Athens)
4/90 (16 pages) "Royal Hellenic Air Force in 1940: Part 2" 6 pages including 5 photos and 5 drawings (Fairey IIIF, Blenheim IV, Battle, Hs-126, & Do-22).

HUNGARY

AERO HISTORIA, Budapest Pf. 61. 1631.
December '90 (54 pages) "Touring Plane MSrE M-19" 3 pages including 2 photos and a small 3-view drawing. "IL-10 in the Hungarian Air Force" 12 pages including 14 photos, 4 side-view drawings (including one with star-in-circle insignia), and 2 pages of scale drawings. "Hungarian Airplane Projects in Austria" 3 pages including 3 3 photos (L-4 & L-6). "History of Hungarian Gliders" 5 pages including 5 photos. "The Romanian Air Force in Hungary; Nov. 1918 to march 1919" 6 pages including 4 photos (1-1/2 Strutter, Nieuport 17, Farman F-40, & Breguet 14). "American Pilots in South Hungary" 8 pages including 6 photos. "Target Kecskemet: 14 June 1944" 4 pages including 4 photos and one map. "RHAF Bombs".

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; 4 issues 24,000 Italian Lira in Europe or $18.00 overseas).
3-4/90 (32 pages) "Frogfoot" 6 pages including 7 photos, sketches of landing gear, and one-page drawing of Czech aircraft (luscious "Anca", aka '6019').

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).
12/90 (98 pages) Color photos: East German MiG-29 '27.08.90'; Czech MiG-21 '0403' & 0404'; Czech Tu-134A '1407'; Polish Tu-134A '102'. "Colombian Aviation" 15 pages including 31 color photos (A-37B, DC-3, T-41D, T-34, Hughes 300, Hughes 500M, Cessna 310, C-46, DC-6A, CASA 212, Pilatus PC-6, & HS-748).
1/91 (98 pages) Color photos: Seychelles Defence Force BN-2A; Algerian C-130H '7T-WHL'; and Kenyan Puma. "Ungheria Alla Svolta" 8 pages including 13 color photos (MiG-23, MiG-21, Mi-24, Mi-8, & An-24). "AV-8B Show" 6 pages including 10 color photos (Spanish AV-8B, SH-3D, & AB.212).
2/90 (98 pages) "Aircraft in the Gulf" 7 color photos (Italian F-104; British Tornado; French Mirage F.1CR. Mirage 2000, & Jaguar; and Kuwaiti Skyhawk). "Phantoms with the Iron Cross" 7 pages including 10 color photos. "A Gulf Crisis 50 Years Ago" 8 pages including 18 photos of Iraqi aircraft (S.79B, Gladiator, Puss Moth, Dragon, Nisr, Ba-65, Northrop DB-8A, Fiat CR-42, Ju-90B, & Bf-110D).

POLAND

AERO TECHNIKA LOTNICZA (ASR. POCZT. 8, 00-930 WARSZAWA 71)
7/90 (44 pages) "Su-25" 13 pages including 12 photos (3 in color), 2-page cataway drawings, and 3 pages of 1/72-scale drawings. "US Marine Corps" 4 pages including 4 photos, 6 color side-view drawings, and tables. "Haganah: Part 2" 4 pages including 4 photos and 5 side-view drawings (Beaufighter, C-47, P-51D, Norseman, & B-17G). "PZL P.24" one page with 7 photos of details. "Polskie Samoloty w Bulgarii 1937-1945: Part 2" 2 pages including 4 photos (PZL-43A, PZL-43B, & P.24). "Martinsyde Buzzard" one page including one photo and 3-view drawings of aircraft in Polish service.

8/90 (44 pages) "F-15 Eagle" 10 pages including 7 photos, 4 pages of scale drawings, and a 2-page cutaway drawing. "L'Armee de l'Air" 4 pages including 3 photos, 6 color side-view drawings, and Order of Battle. "LOT-owski DC-2 w Rydze w 1942 r." one page with scale 3-view drawings of 'SP-ASK'. "Polish Civilian Aircraft Evacuated to Romania" 2 pages including 6 photos (RWD-21, RWD-8, RWD-13S, Lockheed L-10A in Romanian markings), and table. "Sketchbook: RWD-8" one page on sketches. "Polish Aircraft in Bulgaria 1937-1945: Part 3" 2 pages including 3 photos (PZL 43) and 2 tables. Photos: Cierva C-30 'SP-ANN', Lublin R-XVI 'SP-ADH', & DH-60G 'SP-TUR'.
9/90 (44 pages) "JU-87 Stuka" 16 pages including 11 photos, 2-page cutaway drawing, 5 pages of 1/72-scale drawings, color 4-view drawing, and 6 side-view drawings (Spain). "Battle of Britain" 4 pages including 2 maps, 6 color side-view drawings, and order of battle. "PZL P.11c" 2 pages with 9 photos of details. "PWS-10 w Hiszpanii" one page including 2 photos and 3-view drawings of aircraft in Spanish service.

ROMANIA

MODELISM TEHNIUM (Aeronaval Document, PO Box 8028, Bucharest, ROMANIA.)
5-6/90 (48 pages) "Romanian He-111" 5 pages including 5 photos, 1/72-scale drawings, and color 3-view drawing. "Nieuport 11" 5 pages including 4 photos, 3-page 1/32-scale drawings, and 3 color side-view drawings (one Romanian). "Aero L-39ZA" 3 pages of 1/48-scale drawings. "Da Vinci III" 3 pages including 1/144-scale drawings of Cal-Poly's man-powered helicopter. "Martin B-57B" 3 pages of 1/72-scale drawings.

SWEDEN

KONTAKT (Kontaktgruppen, Box 4015, S-422 04 Hisings Backa; 5 issues/year)
#98 September 1990 (32 pages) Most of this issue deals with the Airbus A300 in SAS/Scanair service, Photos: J 34, Austrian J 35D.
#99 December 1990 (36 pages) "SAAB 21" 31 pages including 32 photos, 4-view drawing, and table.
#100 February 1991 (36 pages) "TP 47 Catalina" 25 pages including 27 photos and 4-view drawing. Photos: J 9, S 17BS, Tp 24, RNoAF Catalina, RDAF Catalina, Danish Army Cierva C.30A.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues $ 20.00).
#131 (122) pages "Langley's Aerodrome" 21 pages including 32 photos and 2 scale drawings. "The Wright Stuff II" 15 pages including 7 photos and 2 scale drawings (1903 & 1904 Flyer). "Montgomery, cont'd" 11 pages including 14 photos and 2 scale drawings. "Cockpits/Instruments" 7 pages including 14 photos. "Archiv" 5 pages on German radiators. "Engines" 6 pages on RAF engines. "Drawings" 6 pages (Farman Biplane, Hansa-Brandenburg C.I, & Mickl Oeffag "R").

SKYWAYS (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues $20.00).
#15 (84 pages) "Navy & Marine Aircraft 1934-1939" with 26 photos. "The Olympics and the Alcors: Part II" 8 pages including 20 photos. "Log of the Friesley Falcon: Part I" 7 pages including 5 photos. "Fairchild KR's" 6 pages including 6 photos. "Kalinin K-7" 3 pages including 3 photos and 2 pages of scale drawings. "Cockpits" 7 pages including 6 photos of Boeing 314 cockpit.

PRI-FLY (IPMS Washington DC, c/o Carol Fleckenstein, 13816 Choptank Ct., Centreville, VA 22020; 4 issues $8.00 for US, $9.00 all others).
#76 (16 pages) "Chetverikov SPL" 3 pages on scratch building this little flying boat with scale drawings.

AEREI and AEREI MODELLISMO

This is a round-up of items of Small-Air-Force interest published in these two magazines during 1990. Subscriptions: Aerei Lit. 70,000; Aerei Modellismo Lit. 59,000. Back issues: Aerei Lit. 12,000 each; Aerei Modellismo Lit. 8,000 each. Back issues are available from 1/90 on, plus some issues from 1989 for both magazines. The preferred method of payment is by IMO, or cash on delivery in the countries adhering to the European Economic Community. The address of the publisher is: Delta Editrice snc., Casella Postale 409, Borgo Regale 21, 43100 Parma, Italy.

AEREI

March 1990. Four color photos of Spanish AV-8Bs; an article on the 4th Stormo of the AMI including 11 photos of F-104S/ASA plus one b&w photo of a visiting Spanish F-18; 4 photos of Italian Tornados; a b&w photo of an Italian C-130 sporting new low-viz codes and much reduced national insignia; an article on the 1940 campaign against France including 10 photos and 8 color profiles representing various Italian and French aircraft taking part in the campaign.
April 1990. A color photo of the 100th F-104ASA; a color photo of a Greek TA-7H; an article on Aeronavale's last Crusaders with 7 color photos and a cutaway drawing; an article on the 2-seat AMX prototype roll-out including 2 color photos; also the giant center-spread color drawing is devoted to the AMX.
May 1990. 2 color photos of the first Swiss B.Ae. Hawk; an article on the French Jaguars with 10 color photos and a cutaway drawing; color photos of an Indian Mirage 2000; an Australian PC-9; b&w photos of an Australian F-18 and 2 Japanese ASDF Learjets; an article on the Fiat/CMASA RS-14 seaplane of WWII; 2 color photos and a color 3-view of Japanese F-104s.
June 1990. A color photo of the South African attack helicopter Atlas XH-2 Rooivalk; a b&w photo of a Belgian C-130; an article on the Mirage 2000 with 5 photos of French machines and a 3-view drawing; an article on the Soviet Air Force Museum at Monino with 12 photos of aircraft from the Tu-4 Bull to the Fencer (not small air force, but surely an interesting matter).
July/August 1990. A color photo of the first Thai F-16A; a color photo of the second Saab JA-39 prototype; a color photo of the Rafale prototype.
September 1990. A color photo of the Czech L-39 and the Australian F-111 that performed at Farnborough; an article on the Alpha-Jet including 5 color photos, a b&w one, and a small cutaway; 3 photos of Greek A-7Hs including a 2-seater; the giant center-spread drawings is devoted to the 2-seat Mirage 2000N.
October 1990. A b&w photo of a French Gazelle helicopter; a color photo of a Dassault MD-311 Flamant; an article on the Gulf Crisis with photos of Iraqi Mirage F-1 and MiG-29, Dubai MB-339, Saudi Tornado, and Jordanian F-5; a color photo of the South African Cheetah and b&w photo of a South African Canberra; a b&w photo of a Pakistani F-16C; a long article on the Sino-Japanese war of 1937 with 2 pages of color profiles representing Japanese Ki-21, Ki-21a, Ki-30, Fiat BR-20, and Chinese SB-2, Curtiss Hawk III, and I-153; a b&w photo of a Fiat G-80; 5 color photos of a Yak-28 with many interesting details.
November 1990. A color of the 2nd Grippen; 3 pages of color photos of Italian Tornados in desert yellow camouflage; an article about Czech Air Force with 7 photos of MiG-21s, Mi-8s, Mi-24, and L-29 Delfins; a short article on AMI's future programs with 3 color photos of Italian aircraft (MB-339, C-130, G-222, AMX).
December 1990. A color photo of a Spanish AV-8B; an article on the Finnish Air Force with 11 photos including HS Hawk, MiG-21, Magister, C-47, and Draken; a 2-page article on the Shin Meiwa PS-1/US-1 with 4 color photos; 2 articles in the East German Air Force including 15 photos on DDR aircraft mainly MiG-21s, MiG-29s, and L-39s; an article on the Israeli Air Defence Force with 9 photos.
January 1991. An article on Polish Fitters including 11 photos and a small 3-view drawing; an article on AMI's 41st Stormo with 8 color photos of the unit's Atlantics; an article dealing with the Saab Draken with 6 photos and a small 3-view drawing. Included with this issue is a 16-page booklet about the various aerobatic teams of the Italian Air Force from 1950 to 1963 with many b&w photos and 8 color profiles. Starting with this issue, "Aerei" and "Aerei Modellismo" are printed on a higher-quality paper that gives a superior photo reproduction.

AEREI MODELLISMO

March 1990. Nothing of Small-Air-Force interest.
April 1990. A giant color drawings representing a Pakistani F-16A.
May 1990. An article on the Mi-24 with 9 b&w profiles of Hinds including Afghani, Algerian, Lybian, Polish, Angolan, and Iraqi machines, plus 6 b&w photos and 2 detail sketches.
June and July/August 1990. Nothing of Small-Air-Force interest.
September 1990. A page of color profiles of the A-4 representing Argentine, Indonesian, Australian, New Zealand, and Kuwaiti machines.
November 1990. Two color drawings representing an Italian Tornado in desert yellow for deployment to the Gulf.
December 1990. An article on the Fiat G-55 fighter including a written description of some peculiar camouflage schemes appearing in the RSI Air Force during 1944, with FS595a equivalence (everything in Italian, of course); a long article on the early versions of the A-4 with detail sketches and a color profile representing an Argentine A-4P.
January 1991. The center-spread drawing represents an Italian F-104 is enriched by 10 color photos and many detail sketches.
Mario Bartoli (SAFCH #719), via F. Carnelutti 6, 56124 Pisa, Italy.

HISTORIEN OM FLYVEVABNET, Lt. Col. Hans A. Schroder. ISBN 87-503-8509-7. Printed in Denmark 1990. Price 198 kr plus 37 kr postage from Flyvevabnets Specialskole Jonstrupvej 240, 2750 Ballerup, Denmark.

This is exactly what the title implies, the History of the Royal Danish Air Force. First a few facts: The book is written entirely in Danish, it is hardbound, and has 257 pages 16 cm by 24 cm. It was issued to celebrate the 40th anniversary of the RDAF which was formed in 1950 by the amalgamation of the air components of the Army and Navy.

The time up to 1950 is covered briefly in 36 pages. The next chapters go through the flying squadrons, mobilization air bases, base defense squadrons, surface-to-air missile squadrons, and the control and warning organization. The other functions, without which nothing would work, are also covered: exercises, repair and supply, support, and training. Also, the chaplin service, the Air Force Library, and Air Home Guard do not escape the attention of the author.

This book does not contain any drawings; instead you will find portraits of many of the important air force officers. What, then, will the average Small-Air-Forces enthusiast get from this book? Aside from the the unit histories, which most readers will be able to decipher with the aid of a dictionary, the best part of the book is the (black and white) photographs. These are very clear and well printed, and while Dutch enthusiast will have seen most of them before, some are "new", and the selection covers most military aircraft types in use in Denmark. The photo captions are extremely brief, but an appendix contains detailed descriptions of each picture. How about a WWII photo of an Army SG 38 glider serialed GL-1? Ideal reference for that HUMA kit which you can't bear to build in German markings.

For may own part, at least, I am glad that I bought this book!

Kai Willadsen (SAFCH #516), Sankt Jorgens Gade '6, 4200 Slagelse, Denmark.

AVIONES EN LA GUERRA CIVIL ESPANOLA, 1936/1939, INGLESES - CHECOS - POLACOS, by Justo Miranda and Paula Mercado. Aldaba Ediciones, Madrid, 1990; 294 pages, 112 pages of 1/72-scale drawings, 60 color profiles in 1/72 scale, 130 b&w photos, appendices, index.

This is the second volume of a projected series of seven books covering approximately 292 types and sub-types of aircraft used in the Spanish Civil War. The first volume (published by Silex Ediciones) described Soviet and American aircraft. The present work covers 41 types of aircraft: 31 British, 4 Polish, and 6 Czech, not all of which were delivered to Spain during the war. Multi-view drawings for each type are included in 1/72 scale, along with the type's history and specifications. All known color schemes and markings are illustrated.

Additionally, there are appendices on aircraft engines, armament and bombs, identification codes used by both sides, the genesis of Nationalist insignia, camouflage patterns, model kits available for all types used in the Civil War, British, Polish and Czech aviators in the war, and an index of all aircraft types relating to the Spanish Civil War. Actually, there is an unbelievable amount of accurately-researched information here: The chapter on aircraft codes includes 130 numbers for single-engined aircraft coded 30- by the Nationalists either during or after the war; the chapter on modeling includes references for each type of aircraft as well as a list of decal sheets and Humbrol paint colors applicable to modeling aircraft of the Spanish Civil War.

There is too much excellent work in this book to do it all justice in a short review, but some of the more interesting illustrations are: The DeHavilland DH-89 which brought Franco to Morocco in July 1936. The Airspeed Envoy in which Gen. Mola died on 3 June 1937. A Monospar ST-25 coded R-E which flew from Llanes, Asturias, in 1937. A Loyalist RWD-9 which crashed near Limoux, France, on 31 October 1937. A DeHavilland DH-80A with the words OLIMPIADA POPULAR painted under the wings for the "Workers' Olympics" held at Barcelona to protest the Summer Games of 1936 in Germany.

This work is very highly recommended. (An English translation is planned, if you can wait that long!)

Tom Sarbaugh (SAFCH #497), #266 Lake Drive, Kensington, CA 94708-1132.

AIRCRAFT OF THE SPANISH CIVIL WAR, 1936-1939, by Gerald Howson, Putnam Aeronautical Books, London 1990; 310 pages, 372 photos, 4 maps, tables, appendices, index, £ 35.00 (about $60.00).

Howson's study of the 280-odd types of aircraft used in the Spanish Civil War has been awaited for a long time by aficionados of the conflict who are particularly interested in aircraft smuggling. About one-sixth of the approximately 3,000 aircraft sent to Spain during the war did not go legally, and the author is an expert on the subject of clandestine shipments. He does not, however, neglect the other shipments of aircraft. Each aircraft type is presented in alphabetical order with its history, specifications, wartime use, unit affiliations, and photographic illustration. Many of the photos are familiar, but quite a few are published for the first time.

Appendices provide data on Civil War airlines, the shady companies formed to smuggle war material, aircraft shipments from the US, Canada, and Mexico, aircraft sought or purchased for Spain but never delivered, aircraft reported in Spain which probably never arrived, and numbers of each type of aircraft actually used by the opposing sides.

This is clearly the best book on Spanish Civil War aircraft to appear in English, and its descriptions of rare types even surpass those in foreign languages. For example, Howson is the first to identify some aircraft types present in Spain during the war.

However, this book is less complete in its treatment of military aircraft numbers and codes, unit and personal markings, colors and camouflage schemes, some of which are better treated elsewhere. In the descriptions of a few aircraft types there are a few errors and omissions. Also, a few of the photographic captions ontinuedincorrectly identify aircraft sub-types.

Nevertheless, it is likely that this volume will remain the standard work on the subject for many years to come. Though it is not cheap, it is a highly-recommended addition to any serious collector's library on the Spanish Civil War.

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HARVARD! THE NORTH AMERICAN TRAINERS IN CANADA, by David C. Fletcher and Doug MacPhail. DCF Flying Books, PO Box 8589, Dundas, Ontario, L9H 5G1 Canada. $34.95 ($32.95 to IPMS Canada members - give membership number)

This is a gorgeous book, and if you're a Harvard/Texan nut, it's got to be in your library. Privately published by a couple of modeler/aero historians, it gives loads of details and color schemes for modelers. More than 300 black & white photos, 12 color photos, and seven full-color profiles focus on use of the aircraft in Canada, but provide considerable coverage to development of the aircraft and its use in other countries as well. For example, this is the first place I've ever seen a photo of the South Korean T-6F on floats.

Other non-Canadian coverage includes French Yales (RCAF Yales were taken over form the French order after the fall of France), including a captured example in Luftwaffe markings, and an AT-6F in Soviet insignia (crossing Canada en route to the USSR). Postwar coverage includes Dutch and West German aircraft. Some will be surprised to learn the USAF loaned the RCAF 100 standard T-6Ds in 1950. They carried USAF insignia during their entire RCAF service, being returned to the US in 1953.

The Canadian variants are covered in extraordinary detail. Complete lists of aircraft serial numbers and airframe histories are included. Beautifully rendered 1/72 scale drawings of the NA-26, Harvard Mk I, NA-44, NA-64 Yale, Harvard II and IIB, T-6D, and Harvard Mk 4 will be of particular use to modelers. The modeling background of the authors is apparent through the selection of detail photos and drawings. Everything you need to detail a model is here.

If you're interested in the T-6 and its variants, this book is for you. Its available direct from the authors, who will accept personal checks (but not plastic) in US or Canadian dollars. If you're one of the first 1000 people to order the book, you'll also receive a beautiful 13" x 19" full color print of a Harvard Mk 4 profile at no extra charge.

Davis H. Klaus (SAFCH #891), 3404 Ramsgate Terrace, Alexandria, VA 22309-2142.

POLSKI SAMOLOT I BARWA, by Tadeusz Krolikiewicz, Poland. 28 cm by 20 cm, 224 pages, hardbound. 264 b/w photos, 34 color photos, 72 pages of color drawings, dozens of b/w drawings, and tables.

This excellent book describes the paint schemes and markings carries by Polish military and paramilitary aircraft from pre-WWI to present including French, RAF, and Soviet, aircraft flown by Polish personnel in WWII. Although all the text is in Polish, the book is so profusely illustrated that even non-Poles are able to understand quite a lot of the contents. One problem, however, is the quality of the photos which range from decent to terrible; this is due to the usual limitations of Eastern European printing. Still, the photos are no worse than in other Polish and Czech publications. The color drawings are well done and in register, although the colors tend to be a bit 'washed out'; again mainly due to the printing process and so-so paper quality. The tables are very interesting and cover a wide range of subjects, including such unusual information as the codes and construction numbers of all Polish-flown Yak-1s in the autumn on 1944.

All in all, this book is warmly recommended to anyone with an interest in Polish aviation.

Leif Hellstrom (SAFCH #786), Servitutsvagen 3, S-145 59 Norsborg, Sweden.

(Continued on page 62.)

THE VAN BERKEL WA

Colin Owers

During World War One, the demands of aerial warfare on the Western front were such that the warring nations could not spare any aircraft for export. Being a neutral nation, the Netherlands had to become adept at salvaging aircraft that landed in its territory either because of combat damage or navigation error. The majority of these interned aircraft were landplanes which were used by the Luchtvaartafdeling (LVA). The Naval air arm, the Matineluchtvaartdienst (MLD), received only 13 useable aircraft from this source.

The Dutch Intern a Modern Floatplane. On 22 April 1918, a German Hansa-Brandenburg W.12 floatplane, (Marine Nummer 2098) crewed by Deckoffizer A. Walter and Flugobermaat L. Wuggazer, ran out of fuel and was forced down south of Rottum Island. A salvage team from the MLD base at De Mok under the command of OSMD3 H.J. Takens found the aircraft intact on a sandbank. To protect Dutch neutrality, standing orders were issued to that all such aircraft were to be dismantled and transported to the nearest military establishment. Since Takens and his two helpers had no facilities to undertake the dismantling of the W.12, it was decided to tow the aircraft to the coast. Once there, a passing sailing vessel was commandeered and the floatplane hoisted onboard. The German insignia was then covered as well as possible and the craft set off for De Mok. While Takens was praised for his initiative, the consequences of openly transporting a seaplane belonging to one of the combatant nations thereby compromising Dutch neutrality was was pointed out to him. As the MLD welcomed the addition of the modern floatplane to its inventory the matter was quietly hushed up.

Designed for the German Navy by Ernst Heinkel, the Brandenburg W.12 had quickly proved a formidable opponent for the Royal Air Force's flying boats over the North Sea. The W.12 was built by the Germans in seven batches, aircraft from each batch differing in detail. The machine obtained by the Dutch, Marine Nummer 2098, was from the batch 2093-2122. It was powered by a 160hp Mercedes engine and equipped with a fixed forward-firing synchronized machine gun as well as a gun mounted on a ring in the rear cockpit.

The Dutch insignia was painted on the interned aircraft and it was test flown by LTZ1 D. Vreede. The pilot was so enthusiastic about the performance of the Brandenburg that it was purchased from the German Navy for Hf 25,000 and given MLD serial W.1. Nummer 2098 was actually the second W.12 to come into Dutch hands. On 6 December 1917, the gas-vessel Vlissingen came across W.12, Marine Nummer 1398, drifting 34 km off Westkapelle. The German crew were rescued after drifting for 22 hours, but the aircraft was wrecked in the attempt to take it aboard the vessel.

In November 1918, a third W.12, Marine Nummer 2200, crashed near Terschelling, Frisian Islands, but the damage was so extensive that the aircraft was not useable.

License Production Begins. The Brandenburg W.12 so impressed the MLD that it decided to undertake license production of the type. On behalf of the MLD, Lt. Vreede approached the Van Berkel Patents firm (N.V. Maatschappij tot vervaardiging van snij-machines volgens v Berkel's patent en andere werktuigen) in Rotterdam. Van Berkel was a butcher who through his patents for meat- slicing machines had become an important industrialist. Lt. Vreede was well acquainted with Mr. Van Berkel, and the latter agreed to undertake the financial risk of license production of the W.12.

In late 1918, an aircraft workshop was set up at Keileweg 9, Rotterdam. On 15 November, a contract was signed between the Munitions Office and the company for the production of slicing machines according to "Van Berkel's patent" and other tools. This contract meant an order for 35 modified Brandenburg floatplanes powered by 200hp Hispano Suiza engines, which Van Berkel was also to produce under license.

The cost of each floatplane delivered in the Netherlands was to be Hf 35,100, but this was increased before the contract was signed to Hf 35,500, reflecting increasing costs. A clause allowed for further price increases to a maximum of Hf 42,000 providing the company could substantiate the cost increases. In the meantime, the interned W.12 had crashed and could no longer be used as a comparison with the licensed product. Therefore, on 23 June 1920, the performance specifications were changed to equal those of the Friedrichshafen FF 33L (MLD serial V-3) that had been interned on 24 September 1917.

At first the project went slowly, however, after April 1919, a number of experienced German workmen from Friedrichshafen were engaged, and under the supervision of Van Aerssen, a Belgian, the project of copying the Brandenburg design was completed. The W.12 were to be known as the Van Berkel WA (after W.A. Van Berkel).

The first engine castings by Van Berkel were found to be highly porous and they had to be rejected. This project, the first attempt in the Netherlands to construct an aero engine, was eventually abandoned. Following this failure, Takens, who was supervising the project for the Navy, traveled to Germany where he purchased about 100 Mercedes D.II engines of 180 hp built by the Daimler works at Stuttgart: 60 for the Navy and the remainder for the Army. The Mercedes were preferred to the BMW engine from Fokker as it was felt that the former offered a better high-altitude performance. While in Germany, Takens also purchased a compete engine test rig.

When the first German engine was tested in the Netherlands its output was markedly less that its rated 180 hp, and it was feared that the Germans had sold the "dummen Hollander" a batch of useless engines. After days of anxiety, Takens solved the problem by modifying the exhaust collector pipe. The output now exceeding the specifications.

By mid-1919, the WA had at last entered into full production. The first WA was exhibited at the ELTA aircraft exposition at Amsterdam in July. It was then tested to destruction in the course of sand-loading static tests. The second WA was dismantled and sent by boat to Schellingwouds on 4 September 1919 where it was erected and test flown two days later by LTZ1 H. Nieuwenhuis and Takens. It took only 8 seconds for the WA

to become airborne and a height of 2000 meters was reached. The aircraft performed excellently and it was decided to fly to Rotterdam that afternoon.
Since Van Berkel had widely publicized the WA, a large crowd had massed at the quay and waterside to watch his latest product on its first public demonstration. Nieuwenhuis made some circuits of the ELTA before flying to Rotterdam via the Loosdrecht Lakes and Gouda and appeared over the harbor at about 1745 hours.

The Van Berkel WA in the NEI.
Acceptance tests were passed in October 1919 and Van Berkel WA floatplanes serials W-1 and W-2 were crated for shipment to the Netherlands East Indies (NEI) in November 1919.
The NEI is a vast archipelago consisting of many islands spread over hundreds of square kilometers of sea. These islands with their sheltered bays and inlets offered many natural bases for seaplanes. The MDL had shipped a Friedrichshafen and a Rumpler floatplane to the NEI in 1918, but this first attempt to employ seaplanes in the Indies ended when both aircraft were written off after crashes in 1920.
It was in the Indies that the WA proved it worth. In addition to spotting for the fleet, the WA floatplanes were used for spotting reefs, combating piracy, showing the flag in co-operation with civil authorities, and transporting medical supplies to remote outposts. The prestige of many a local chief was increased by taking him for a ride in a floatplane.
In the NEI, the WA floatplanes were initially based at the former Army seaplane station at Tandjong Priok and later at Surabaya. In 1923 the latter base was replaced by the large airbase constructed at Morokrembangan. The only disadvantage of the WA in the Indies was its short range. As this was insufficient for the aircraft to fly from Tandjong Priok to Surabaya in one hop, an auxiliary base was established at Semarang.

Van Berkel Serials. Serials W-1 to W-20 were shipped to the NEI. The serial W-12a was used in place of W13 although the number 13 was used as a serial on other types. W.21c was built from the wrecks of W-11 and W-19 at the MLD Morokrembangan base at Surabaya.
Serials W-51 to W-70 were used for the WA floatplanes used in the Netherlands. This would imply that 40 WA floatplanes (20 for the NEI and 20 for home) were delivered. However, it is thought that W-66 to W-70 were built by the MLD. The repair shop at the naval airfield De Kooy built complete aircraft so that when an aircraft was written off in a crash it would be replaced by one of these "repaired" aircraft. For example a new W-63 was transported to De Mok on the same day that the wreck of the original W-63 arrived at De Kooy by barge.

Fifteen Years of Service. In home waters, the Dutch ironclad HMS Hertog Hendrik and HMS Jacob van Heemskerk were modified to carry the WA Floatplanes. In the Indies, eight destroyers were modified to carry a WA on their sterns. In addition, the minelayers HMS Siboga and HMS Serdang were modified to carry two and three floatplanes respectively. All new ships were built to be able to carry aircraft.
In October 1924, W-51 was completed at De Kooy with a steel-tube fuselage designed by OMSD2 A. Framer. After this modification proved to be a success, all WA floatplanes were so modified when they came in for overhaul.
In the Indies, aluminum floats, built by Dornier at Friedrichshafen, replaced the the wooden floats of the WA.
In July 1930, the last wooden WA, serial W67, was written off after a forced landing near De Mok. During 1934, the remaining Van Berkel WA floatplanes were retired after 15 years service. There were only three fatal crashes of the WA. In all cases both crew members were killed.: (1) 28 September 1925: W-57 near Den Helder. (2) 2 June 1927: W-16 in the Java Sea. (3) 2 September 1930: W-54 at Loosdrecht Lakes.
In closing the chapter on the WA, mention must be made of its successor, the Van Berkel WB. This monmplane is often referred to as a Brandenburg type. However, it was a completely original design displaying Brandenburg influence. Only six WB floatplanes were built. They were the last Van Berkel aircraft to be constructed.

The Van Berkel WA Described. The fabric covered wings were of orthodox construction around two spruce main spars. Ribs were of ply, closely spaced and of a deep section to provide the strength required to dispense with the usual interplane bracing cables. The wing tapered in thickness towards the tips. Ailerons were of steel tube and fabric covered.
The fuselage was constructed of ash around four main longerons. Immediately aft of the engine bearers, the longerons swept upward towards the tail to give an elevated position for the gunner, while the slab sides tapered to a vertical knife edge aft with little taper in elevation. This gave an extremely deep fuselage which compensated for the float area and the lack of a vertical fin. The tailplane was mounted high on top of the fuselage well clear of spray and giving the gunner an excellent field of fire. The horizontal tailplane was constructed of wood. The rudder and elevators were of welded steel tube with fabric covering.
The fuselage was supported from the twin floats by a complex but robust system of steel-tube struts, faired with ply and attacked by ball joints. Wire bracing was kept to a minimum. Each float was built of ply and contained five watertight compartments. The pilot was situated behind the engine on top of the fuel tank. Access to the cockpit was facilitated by small doors on each side. Instrumentation was rudimentary: a Morell speedometer on one wing strut, a compass, fuel gage, and a slope indicator. The observer/ gunner was positioned immediately behind the pilot for ease of communication and he had a 7.7mm Vickers machine gun on a ring for defense. When not in use, the Vickers machine gun could be lowered into a slot which was then covered by an aluminum cover. This was the only armament carried by the WA despite the fact that the original specification called for a fixed forward firing synchronized machine gun to be installed similar to the original German machine.
The type underwent many modification in its long career. The steel tube fabric covered fuselage and the use of aluminum floats in the NEI have been mentioned above. In addition, 16 dural floats were purchased for use on the type in the Netherlands, two tailplane support struts were fitted to late production aircraft, and the original rounded rudder was replaced by a larger rectangular one to give better handling on the water.
By 1925 the Mercedes engines were giving trouble and they were replaced during overhaul with 185-hp BMW IIIa, another six cylinder in-line water-cooled engine. The radiator on the leading

edge of the upper wing center-section was replaced by a frontal type and two extra struts were fitted on each side of the fuselage. The BMW engine also saw the elevator balance increased as was the tailplane area to overcome instability in flight.

Camouflage and Markings. All Van Berkel WA in the Netherlands were painted light grey with black serials. Those in the Indies were pained dark grey with white serials. Until mid-1922 they both had a square dot after the W of their serial number. The dural floats were painted black with white serials. During 1922-1925 the WA floatplanes in the Indies were painted in two shades of grey (light and dark) and thereafter they were similarly finished to those based in the Netherlands, that is light grey. Their serials were changed to black and the square dot dispensed with.
Originally, the national insignia consisted of an orange cockade applied to the usual six positions. On 1 July 1921 by Royal decree this was replaced by the familiar red/white/blue cockade with orange center, and rudder stripes were introduced.

Specifications

Span upper wing:	11.17 m
Span bottom wing:	9.60 m
Height:	3.35 m
Wing area:	36.20 sq m
Weight empty:	997 kg
Military load:	230 kg

Performance (Mercedes D.III)

Maximum speed:	135 km/h
Cruising speed:	120 km/h
Climb:	1000 m in 8 min
	3000 m in 38 min
Service ceiling:	4500 m
Range (at cruise):	580 km

Acknowledgments: Special thanks to F.Gerdessen (SAFCH #12); H. A. Somberg of the Aviodome, Schiphol; Sgt. van den Berg of the Royal Netherlands Air Force Ministerie Van Defensie, Bureau Maritieme Historie, The Hague.

Photo Captions: Photos on pages 36 and 68. All photos RNethAF.
(a) W.1 in flight. Note orange roundel on rudder.
(b) The end of W.1.
(c) An early WA. Note radiator above wing.
(d) W.3 in Surabaya harbor.
(e) Front view of an early WA.
(f) W.6 in the light-grey color scheme.
(g) W.9 and W.16 on a minelayer in the N.E.I.
(h) W.60 with nose radiator and revised cabine struts.

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ABC Nose Art for Czech Jets, 1/48 scale.
"The decal sheet provides serial numbers and nose art for three different Czech military aircraft in post-1989 paint schemes. The set consists of a 10 cm by 13 cm decal sheet and an instruction sheet for three color schemes. The first two are for overall-silver Fishbed MF and R serialed '1113' and '1114' respectively, each with a scantily dressed young lady as nose art. The third aircraft is for Su-25K serialed '6019' in standard Czech AF camouflage but with a sharkmouth and luscious nose art. [Editor's note: The young lady, "Anca", on the nose of this aircraft was illustrated in SAFO #56, and she is every bit as lovely on the decals sheet. A supply of these decals as well as the OZE 1/48-scale kits of the MiG-21 are available from the SAFCH Sales Service.] All three aircraft were based at the airfield at Pardubice, about 100 km east of Prague, and their photos have been published in Czech newspapers.

MPM MiG-21MF, 1/72 scale.
This sheet contains markings for of the "foe" aircraft used by Czechoslovakia during the Drushba '86 Warsaw Pact exercises. The machine is painted in standard brown/green over light blue with black serial "8208". The white exercise band around the fuselage, and sharkmouth motif were added for the exercise. The instruction leaflet consists of a 3-view drawing of the camouflage scheme and the decal sheet contains all the necessary markings except the Czech national insignia; the KP kit decals can be used. (This is the same aircraft that is featured on a poster available from the SAFCH Sales Service.)

MPM Frogfoot, 1/72 scale.
This set provides markings for the well-known Czech Frogfoot named "Anca" (Anne). The decal sheet contains the white serial "6019", sharkmouth motif, unit badge, aircraft nickname, and girl-with-nothing-on fuselage art. The czech national insignia is not included, but the kit decals are suitable.

Daniel Petz (SAFCH #623), Na Ladvi 21, 182 00 Praha 8, Czechoslovakia.

MODEL ART DECALS, 72-005. Jaguar 'A' E.C 3/7 'Languedoc; Lynx HAS.2 815 NAS Royal Navy (2); Lynx AH.1 Silver Eagles and Royal Marines; LYNX Mk.80 Danish Naval Air Service; and Lynx Mk.23 Argentine Navy. Model Art Decal System, PO Box 64, Bury, Lancashire BL0 0SF, England.
The Model Art decals have always received rave reviews, and if the sheet I just received is representative of the series, they deserve all this praise. This 20 cm by 15 cm sheet is superbly printed and includes everything necessary to do a colorful French Jaguar and six Lynxes including a pair of small-air-force subjects. Produced by Mark G. Burgess and Jean-Pierre L. Desprez in England, the review sheet was sent to me by Mr. Burgess' brother in South Africa who writes: "The are a number of subjects which will be of interest to our members. 72-002 has 2 Danish and 2 French Meteors; 003 has Meteor NF.13 from Egypt, Syria, and Israel; 005 has Danish and Argentine Lynxes; 007 has Jordanian and Swiss Hunters; 009 has more Swiss Hunters and a very colorful Tucano of the Brazilian aerobatic team, the Fucama; 010 has a Danish Hunters and an Australian MB-326. Recently a new range in 144 scale was started with 144-001 which is all Hunters and is aimed at the forthcoming resin kit from Welsh Models; aircraft covered are from Denmark, Switzerland, Jordan, and the Royal Navy.
"The quality of these decals is superb, packaging and presentation are equally good, and the instructions are uncluttered. Sheets 72-001 to 006 are 2.75 pounds, whilst 007 to 010 and 144-001 are 3.25 pounds each. Postage and packing rates are (outside Europe) + 25% for up to 3 sheets and + 20% for over 3 sheets. Mark informs me they now can accept Visa and Mastercard."
Colin A. Burgess (SAFCH #402), "The Goat House, 43 African Street, The Gardens, Johannesburg 2192, Republic of South Africa.
[Editor's note: If you want to try out the Model Art decals on the cheap, the Jaguar half (it's really half the sheet) of the review sheet is available to the first SAFO member who send $3.00. The British Lynxes, minus the "common markings", are available for $2.00. The money will go into Colin's SAFCH account.]

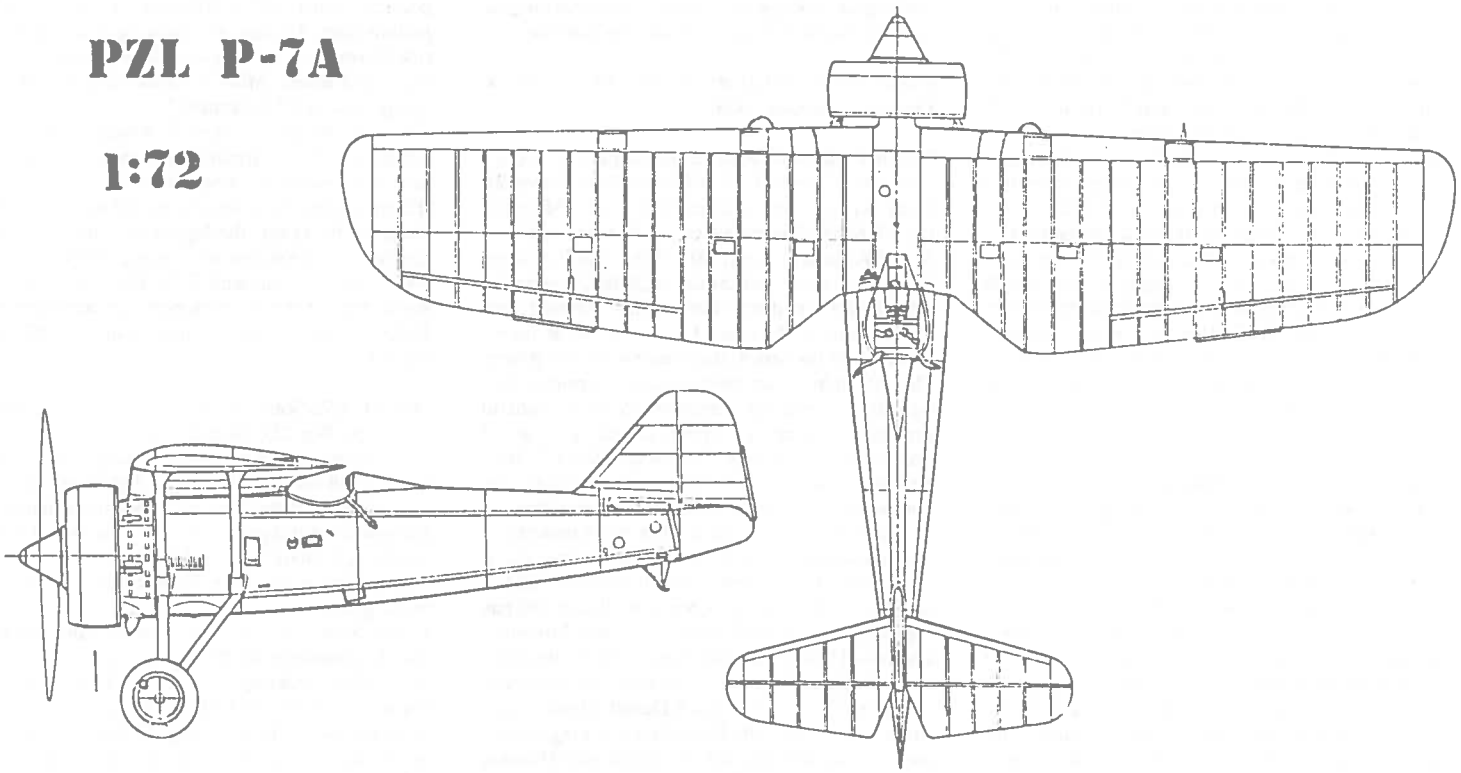
MiG-21 1/72-Scale Decals, Model-Aire International, PO Box 159, Olema, CA 94950.
This excellent sheet provides markings for 2 Soviet and 8 small-air-force MiG-21s. The 7-color sheet, measuring 16 cm by 13 cm and providing all national and squadron insignia, as well as tactical and serial numbers, is sharply printed in dense, vivid colors. The design in the East German insignia is particularly impressive.
These decals are available directly from Model-Aire International for $5.00 per sheet or $3.00 per sheet when ordering 5 or more. They also also available from the SAFCH for $5.00 per sheet.
[Editor's Note: Tom Young of Model-Aire has kindly allowed the SAFCH to reprint the color schemes of the aircraft featured on this decal sheet. Look for "MiG Decalcomania" elsewhere in this issue.]

PZL P-7a, 1/72-scale injection-molded kit from PZW Poland.
This kit consists of 34 beautifully-molded parts, including a clear windshield and a two-part stand. The molding of these parts reminds one of the Heller kits; they are crisp and clean with plenty of well-executed small details. The cockpit consists of four parts (floor, seat, stick, and instrument panel) while the engine/propeller unit consists of no less than 15 parts. The instruction sheet is clear and well printed (something unusual for this part of the world), decal sheet is excellent, and the box-top painting, by the well-known Polish aviation artist Grzegorz Niewczas, is superb.
Because the molding is so good, it is a shame that the kit suffers from several minor inaccuracies. The most serious of these is the wing chord which is 2-mm too narrow. This can be rectified by adding properly profiled pieces of plastic along the leading edge of the wings. The horizontal tail is too small and the tips are incorrect. The propeller is absolutely unacceptable and should be replaced with something more suitable from the spare-parts box. The fuselage is a bit too "fat" when viewed from above and should be flattened using wet-n-dry sandpaper. The shape of the cockpit opening is wrong and the head-rest fairing is far too small. Finally, the rudder should have more rounded corners. All these faults can easily be corrected using the drawings included with this article.
The decal sheet provides the markings for three aircraft: two in Polish markings and one captured machine in Luftwaffe insignia. (The latter would have been impossible in Poland only a few months ago.) The decals are of excellent quality in research, register, color, and adhesion. All three schemes are illustrated in color on the box art. Unfortunately, the underwing codes for aircraft 1 and the serial number for aircraft 2 are unknown. The color descriptions are given in FS595a equivalents, but I suggest the modeler also consult the excellent articles on Polish colors published in SAFO #51 and #52, at least as far as the Polish-khaki is concerned. The new PZW kit of the P-7a is a very nice kit that is a must for any serious collector of WWII or PAF aircraft. It has no more inaccuracies than the average Heller, Airfix, or Matchbox kit and can be turned into a good representation of an important,but heretofore neglected, variant of the Pulawski gull-wing fighters.
Wojciech Butrycz (SAFCH #981), ul. Facimiech 12A m.25, 30 667 Krakow, Poland.

La-9/11, 1/72-scale injection-molded kit from MPM Czechoslovakia.
This kit consists of 35 parts molded in brown styrene and three clear parts. It has nicely engraved panel lines, delicate surface detail, and a thin, clear, vacuformed canopy. Alternate nose sections and a separated belly-mounted oil cooler are provided to allow construction of either the La-9 or La-11. The instruction sheets consist of five pages of text (in Czech, English, and German), assembly drawing, 1/72-scale drawings for both versions, and drawings of the three camouflage schemes covered by the decals. The decal sheet, which is glossy and comparable to the quality of KP decals) includes nation insignia and codes for (1) La-9, USSR, grey overall, serial '02'; (2) La-11, USSR, grey overall, serial '07'; and (3) La-11, North Korean, dark-green patches over standard overall grey, serial '71', and one kill marking. The La-11 served with the air forces of the USSR, Red China, North Korea, and Romania. [Editor's note: Can anyone provide information on the markings for a Romanian La-11?]
Daniel Petz (SAFCH #623), Na Ladvi 21, 18200 Praha 8, Czechoslovakia.

AERO C-104 (Bu-131); 1/48-scale injection-molded kit. MPM Czechoslovakia.
This kit contains 30 brown-styrene parts plus two clear vacuformed windscreens. Surface detail is good with the fabric texture realistic. The decal sheet provides national insignia, stenciling, and serials for a post-war Czech AF machine in greenish-grey scheme. The 5-page instruction sheet is printed in three languages (including English).
Daniel Petz (SAFCH #623), Na Ladvi 21, 18200 Praha 8, Czechoslovakia.

POLIKARPOV R-5; 1/72-scale vacuform kit. MPM Czechoslovakia.
This vacuform kit contains injection-molded parts and decals. The vacuform portion consists of 17 parts molded on two sheets of white styrene plus two clear windshields. The injection-molded parts include propeller, struts, seats, landing gear, oil cooler, instrument panels, and observer's gun. The decal sheet includes markings for the following aircraft: (1) USSR reconnaissance unit, serialed red "5". (2) USSR civil registration "CCCP-K20". (3) Spanish Republican AF serialed "RR-21". The 4-page instruction leaflet is to the high standard we are beginning to expect from MPM with illustrations of 3 camouflage schemes, 1/72-scale drawings, and text in three languages (including English).
Daniel Petz (SAFCH #623), Na Ladvi 21, 182 00 Praha 8, Czechoslovakia.



HISTORY OF THE BELGIAN AIR FORCE

PART I: BETWEEN THE TWO WORLD WARS

Walter Verstraeten

With the advent of peace in 1918 and after the obligatory period of postwar disarmament, the Aviation Militaire Belge went through a series of changes beginning in 1919. The flying units were merged into groups depending on their mission and stationed at various bases built by the Germans during WWI. The Army-Cooperation Group was installed at the Gossoncourt airfield. Bierset received the Bomber Group which was equipped with DH-4s. One section of the Fighter Group settled at Schaffen, the other at Nivelles. Evere was the home for the Reconnaissance Group.

By April 1919, the Aviation Militaire Belge was organized around eight squadrons comprising three Fighter Squadrons using Hanriot HD-1, Sopwith Camels, Nieuport 17, Spad VII, and Fokker D.VII, the latter obtained from Germany as war compensation. As a member of the Occupation Forces in Germany, the Aviation Militaire was assigned a number of duties among which was the requirement to station a reconnaissance squadron at Bochum (Krefeld), and a rotation system was maintained from 1919 thru 1924. In March 1920, extensive changes in the structure of the Belgium Army resulted in the Aviation Militaire becoming the Aeronautique Militaire.

During the war years, training of military pilots had been at conducted by the civilian flying school, first at Etampes and later at Juvisy. After the war was over, it was decided a military flying school should be established at As (Province of Limburg), not withstanding the fact that a private pilot's licence had to be obtained from any of the three civilian flying schools prior to being accepted as a prospective military pilot. This scheme would be adhered to until 1932.

In the same year (1920), in an effort to standardize material, provision was made for the manufacture of military aircraft in belgium. The Societe Anonyme Belge de Constructions Aeronautique (SABCA), which had been founded in Evere in 1920, began licence-construction of foreign aircraft types. Between 1922 and 1931 this factory turned out an impressive collection of types, including:

30	DH-9 (1922-23)
87	Nieuport-Delage 29C-1 (1924-26)
45	Ansaldo A.300/4 Recon Bombers (1923-26)
27	Avro 504K Primary Trainers (1923-27)
15	DH-4 (1926)
20	Morane-Saulnier Parasol (1923)
40	Bristol 17 F2B Mk.IV (1926)
39	Avia BH-21 (1927-29)
146	Breguet 19 (1928-31)

In 1924, the Aeronautique Militaire took possession of the Belgian-designed two-seat trainer, the Renard-Stampe-Vertongen RSV-32. Fourteen 14 were delivered in 1924-25, with 5 more to follow rather belatedly in 1929.

During the same period, the Aeronautique Militaire acquired several types of aircraft directly from foreign sources, including:

35	Fokker D.VII (1919-21)
21	Nieuport-Delage 29C-1 (1924-25)
6	Breguet 19A (1925)
31	Bristol 17 F2B Mk.I (1926)
5	Avia BH-21 (1927)

This remarkable increase in the number of aircraft in service was the result of a series efforts, begun in June 1921, to bring the Aeronautique Militaire up to an acceptable strength. This resulted in a substantial increase in the number of squadrons and a growing need for recruiting new pilots. The organization eventually took the following form:

Group	Total Sqdns	Role	Equipment per Sqdn	Base
I	4	Air Station	1 Caquet Kite Balloon	Zellik
II	6	Observation	10 A-300 or DH-9	Goetsenhoven
III	4	Army Coop	12 F2B or DH-4	Evere
IV	3	Fighter	5 SPAD XIII N-D 27C	Schaffen
V	2	Fighter	5 SPAD XIII or N-D 27C	Nivelles
VI	3	Reconnaissance	8 Breguet 14 or DH-4/9	Bierset
VII	4	Technical		Evere
VIII	3	Flying School	Avro 504K, Caudron II, Fokker D.VII, LVG, MS-35, and DH-9	As

Another regrouping of the units in 1924 resulted in a split-up into three groups: one observation, one fighter, and one bomber group. The Flying School at As moved to Wevelgem. Eventually, in 1926, the three air groups merged into regiments.

Budget restrictions brought forth the creation of a "Direction Superieure de l'Aeronautique". One regiment was disbanded, leaving the following two-regiment deployment at the end of 1929:

1st Regiment

Group	Role	Base
	Headquarters	Evere
I	Observation	Goetsenhoven
III	Observation	Goetsenhoven
V	Observation	Evere
	Balloon Station	Zellik

2nd Regiment

Group	Role	Base
	Headquarters	Bierset
III	Bomber	Bierset
	Fighter	Schaffen
	Fighter	Nivelles

At this time, the aircraft inventory included: DH-4, DH-9, Breguet 19, Nieuport-Delage 29, Avia BH-21, Avro 504K and N, and last, but not least, the indigenous RSV-26. The Flying School at Wevelgem expanded its services to include a primary- as well as an advanced-flying training program.

Still a part of the Belgium Army, the air regiments now included 1990 personnel, 234 first-line aircraft exclusive of reserves, and 36 trainers.

An initial order of 25 Firefly IIM was placed with the British Fairey Aviation Company. Such was the interest for this aircraft within the Air Staff, that it was decided to open a branch factory of Fairey's at Gosselies, with an initial production program for 36 machines envisaged for 1932. Actually, 26 Firefly IIM were built between 1933 and 1936.

Soon after, the advanced observation and reconnaissance Fairey Fox IIM was chosen to be equally manufactured at Gosselies following twelve of these two-seaters which were directly from the parent factory for delivery in 1932. A second order for 26 Fox IIM and two Fox IIS from the Gosselies plant were delivered in 1933. In 1934, fourteen locally-manufactured Fox III entered into service.

In June 1934, a two-year contact was signed with Iran whereby a Belgian team would go to Teheran to train Iranian pilots.

In 1935, the Aeronautique Militaire became one of the two components of the 'Commandement de la Defense Aerienne du Territoire' (DAT); the other being the anti-aircraft organization. From then on, a start was made to rearrange the air arm into three regiments again, each controlling three groups.

Severe budgetary restrictions inspired the staff to upgrade the existing equipment rather than to immediately acquire new aircraft, although 50 Fox IIIC were delivered between 1935-37 and a further 46 aircraft of the Fox IVR reconnaissance version trickled to the air groups from 1935 onward. Equipped with Hispano Suiza engines, these aircraft soon were being referred to as 'Fox Hispanos'.

While 52 Fox VIC fighters were entering into service in the 1935-36 period, two nationally-developed aircraft types were ordered. One was the Renard R-31 parasol-type monoplane of which ten were manufactured by Ateliers Renard in Evere, and 26 were built by SABCA between 1935-37. The second type was the Stampe-Vertongen SV.5. Twenty aircraft of this type were manufactured in 1936. Further acquisitions included the Koolhoven FK.56 trainer, the Fokker F.VII three-engine transport, the Caudron Goeland twin-engined transport, and the Potez XXV communications machine. SABCA delivered ten Morane 230 and 236 liaison aircraft in 1933, and 31 Avro 504Ns between 1936 and 1939.

A batch of 22 Gloster Gladiators, sufficient to re-equip one squadron, were bought from Britain in 1938. Negotiations for possible licence production faltered after lengthy discussions in 1937.

Following the Munich crisis, war clouds began to gather threateningly over Europe, and the Belgium Army went to an armed peace-time stand-by. The Czechoslovakian events urged the DAT staff to search for advanced aircraft with which to re-equip it squadrons. Hampered by an understandable reluctance of foreign nations to export aircraft they badly needed for themselves, the DAT ordered 16 Fairey Battle bombers to be licence-produced at the Gosselies plant. These aircraft differed from the British-built aircraft in that it had an extended nose radiator.

Twelve Fox VIII were ordered in September 1938. This upgraded version of the obsolescent Fox would prove an inferior machine once in combat. Also in 1938, negotiations to buy Hawker Hurricane I fighters lead to an initial delivery of 20 machines originally destined for the RAF. In March 1939, a further order for 80 Hurricanes, to be licence-built at Gosselies, was launched. Of this batch, only three would be ready by the time of the German invasion. The Belgian Hurricanes were to have had four 0.5-in. guns, but the ones finished had only two.

Another relatively modern aircraft licence-constructed by SABCA was the Fiat CR-42 fighter biplane of which 30 were ordered and a substantial number delivered.

As the clouds of war drew nearer, Belgium ordered the Brewster Buffalo from the United States, but these aircraft were still crated at the Antwerp docks when the Germans invaded Belgium.

On 1 November 1938, the DAT was fully employed to meet the enemy, and on 10 May 1940 the situation was as follows:

1st Regiment - Reconnaissance and Artillery Observation

Group	Sqdn	Base	Equipment	Badge
I	#1	Deurne	Fairey Fox IIM, IIIC	Gull
II	#3	Goetsenhoven	Fairey Fox III	Holly Leaf
III	#5	Goetsenhoven	Fairey Fox III	Swallow
IV	#7	Goetsenhoven	Fairey Fox VI	Devil
V	#9	Bierset	Renard R31	Blue Sioux
VI	#11	Bierset	Renard R31	Red Sioux

2nd Regiment - Fighter

I	#1	Schaffen	Gladiator	Comet
	#2	Schaffen	Hurricane I	Thistle
II	#3	Nivelles	Fiat CR.42	Red Swan
	#4	Nivelles	Fiat CR.42	White Swan
III	#5	Nivelles	Fairey Fox VI	Blue Falcon
	#6	Nivelles	Fairey Fox VI	Red Falcon

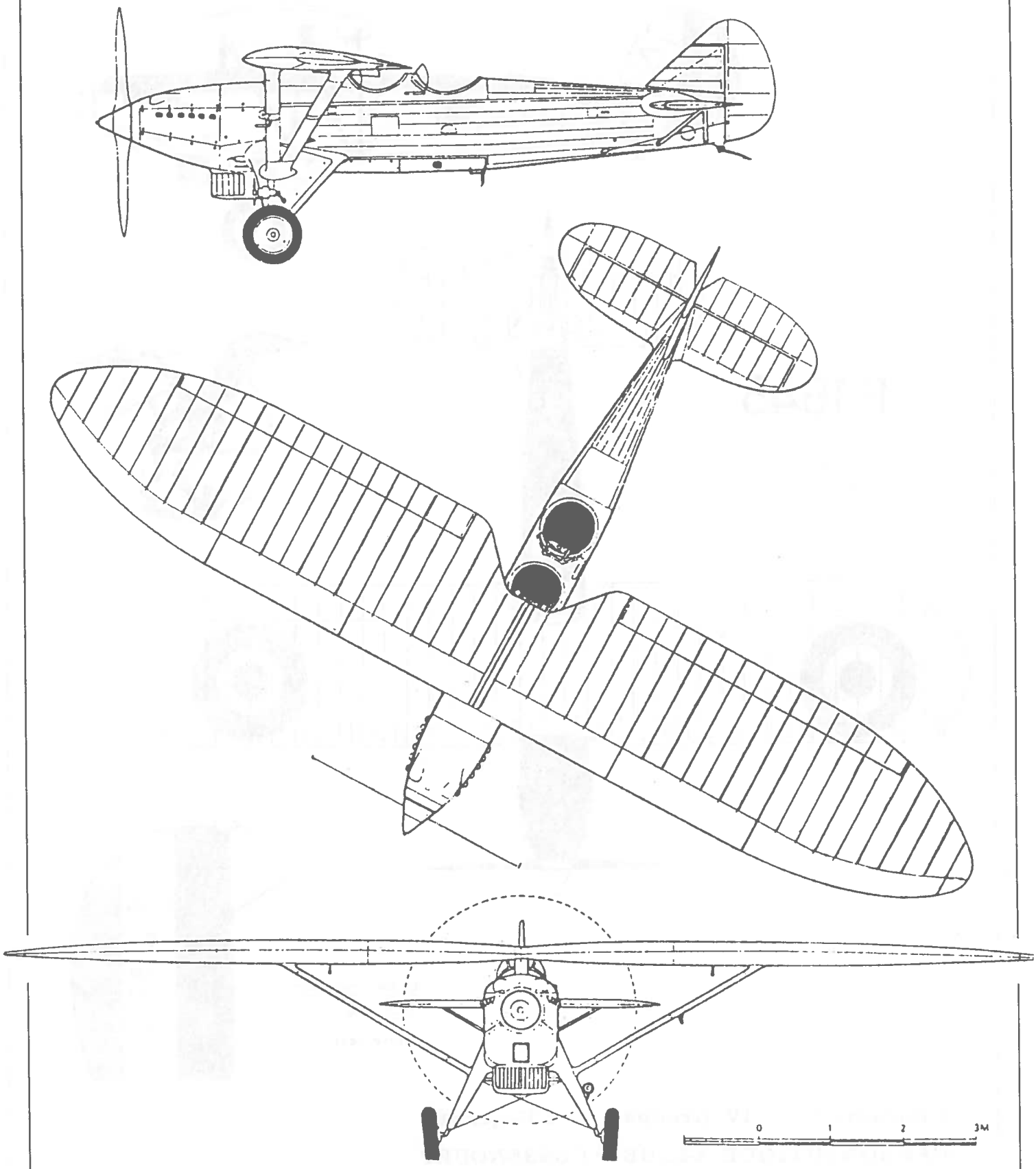
3rd Regiment - Reconnaissance and Bombing

I	#1	Evere	Fairey Fox Rolls	Golden Dragon
	#3	Evere	Fairey Fox Rolls	Silver Dragon
III	#5	Evere	Fairey Battle	Egyptian Falcon
	#7	Evere	Fairey Fox VIII	Winged Arrow

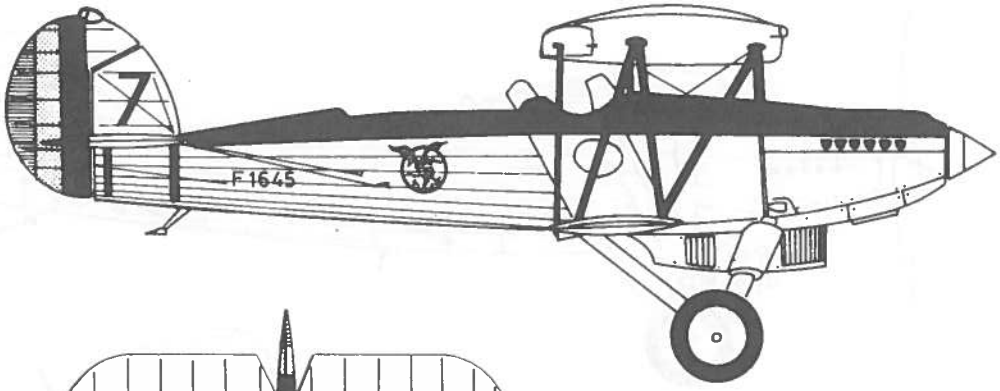
Walter M. Verstraeten, Brevenstraat 116, B-2680 Bornem, Belgium.

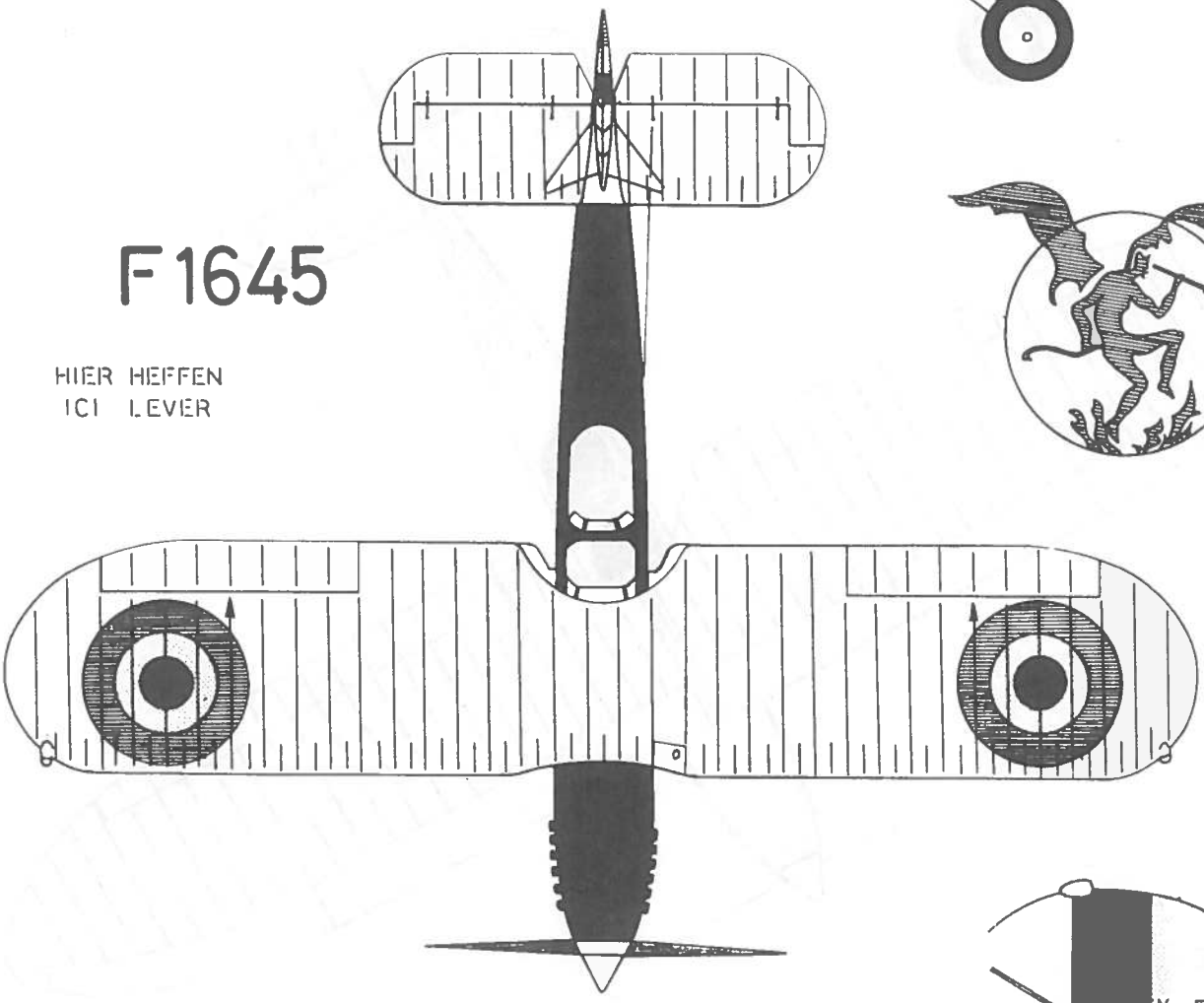
[Editor's note: The period between November 1 1939 and May 10 1940 will be the subject of a separate article and will deal with the initial skirmishes over Belgian territory and the state of alert from January 1940 onward. A third installment will deal with the 18-day campaign and the Blitzkrieg over Belgium. This article and the appended drawings are reprinted with the kind permission of the editors KIT, the magazine of IPMS-Belgium.]

RENARD R-31



FAIREY FOX IIM

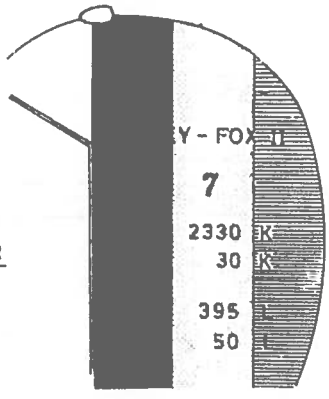




DETAIL RUDDER

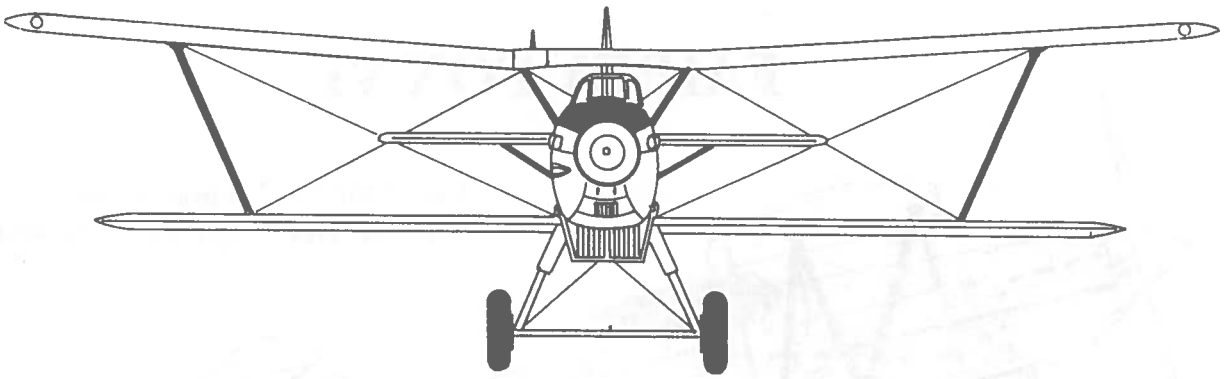
black 7

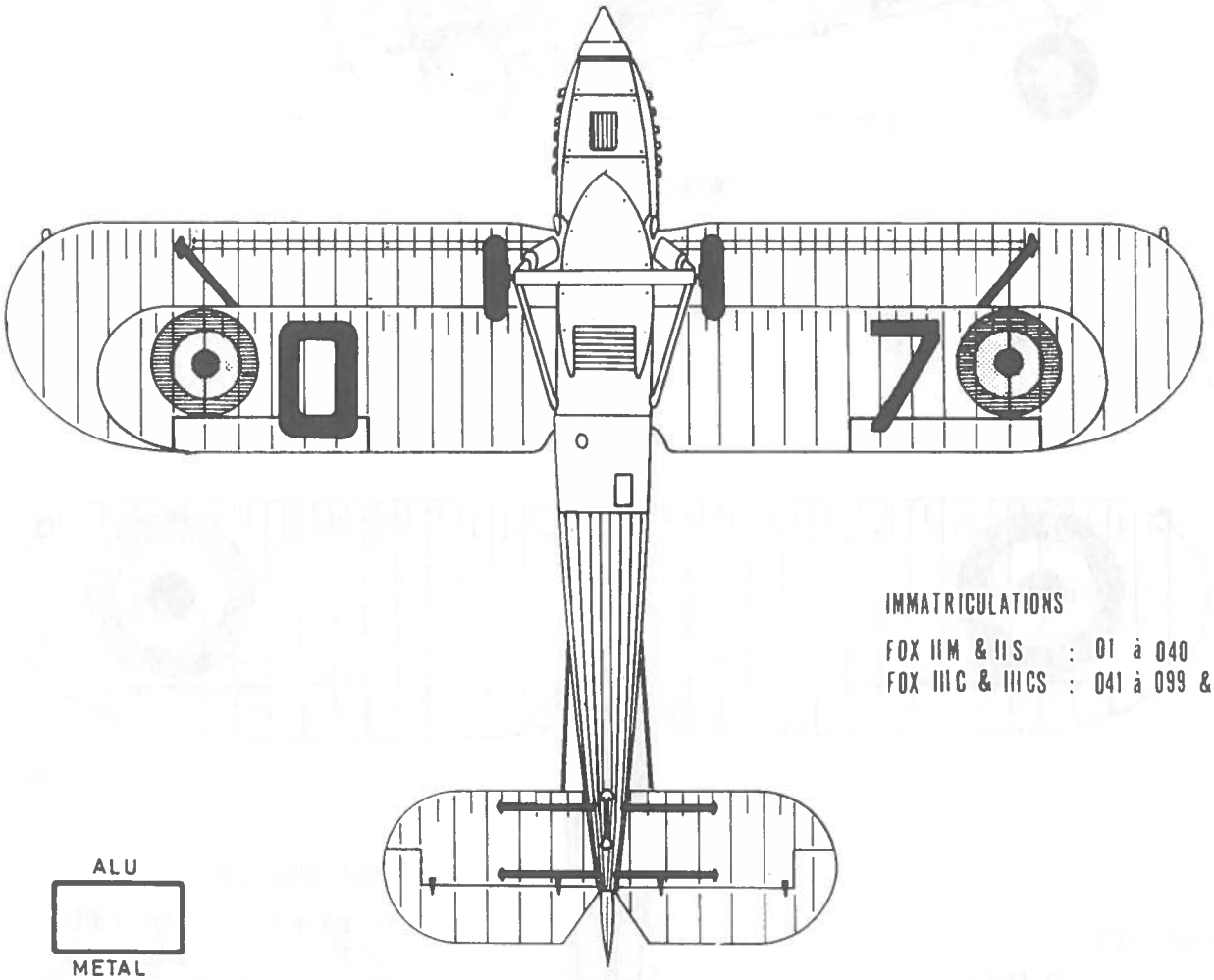
white text



7 Escadrille / IV Groupe / 1 Régiment

d'AERONAUTIQUE BELGE – GOSSENOURT





IMMATRICULATIONS

FOX IIM & IIS : 01 à 040
FOX IIIC & IIICS : 041 à 099 & 0300 à 0307

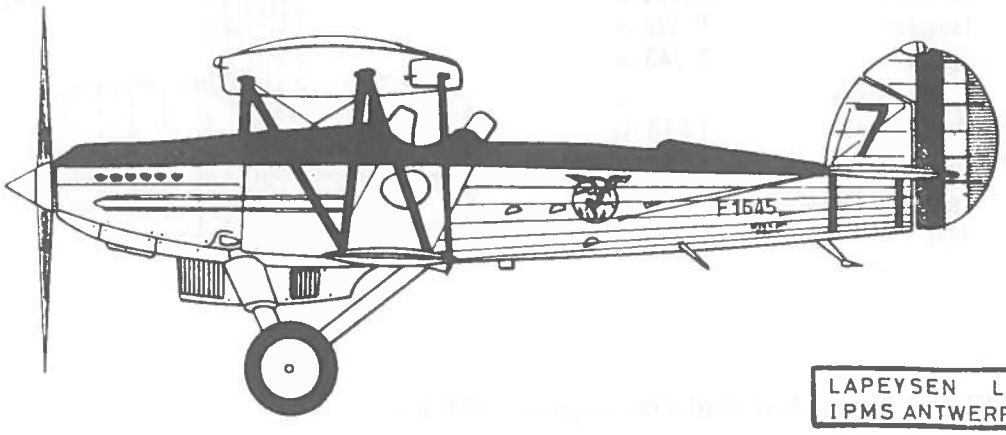
ALU

METAL

BLACK

RED

YELLOW



LAPEYSEN L.
IPMS ANTWERP

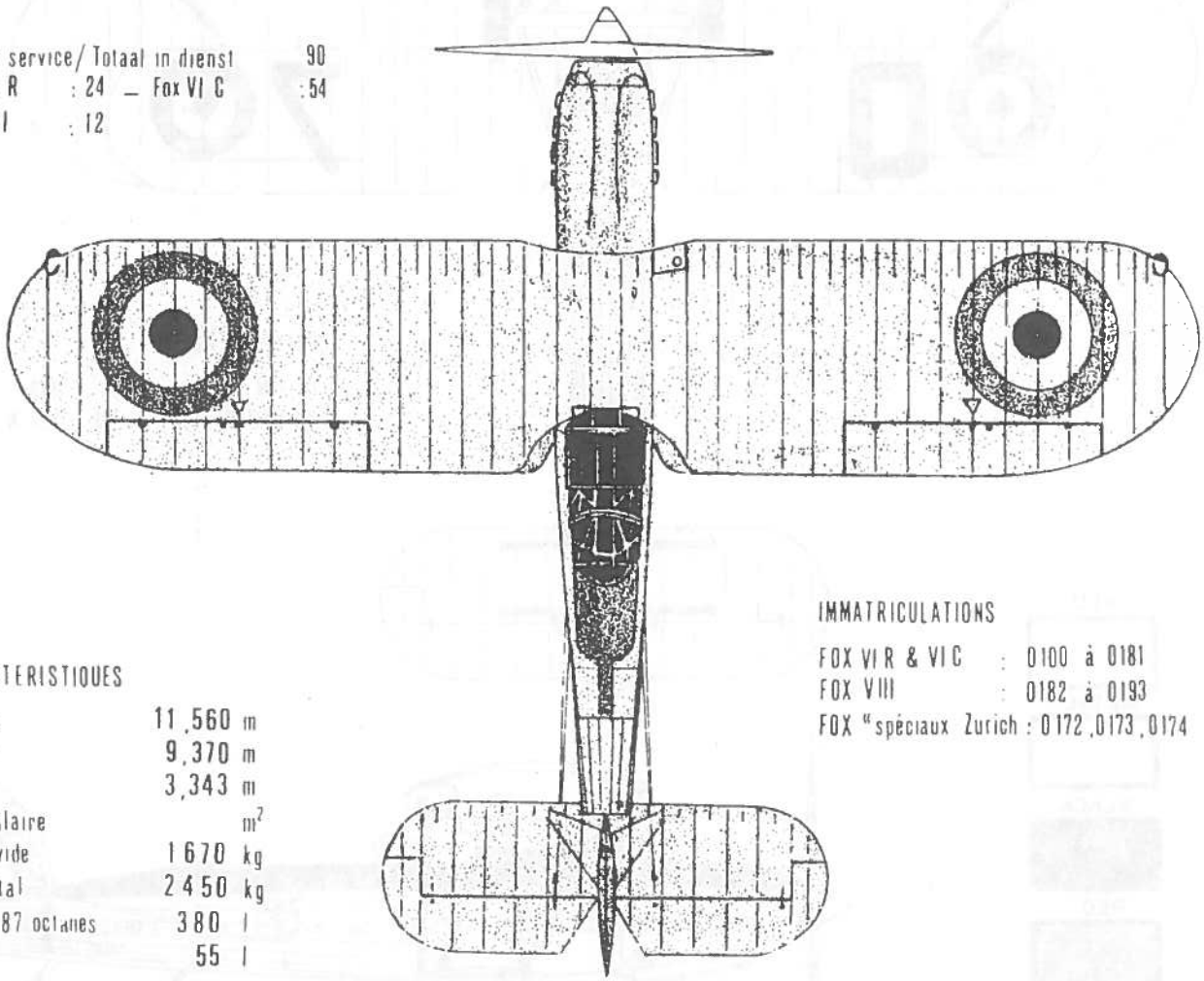
FAIREY FOX VI



- FAIREY " FOX VI R " en tenue de campagne : modèle 1938/39 - 0.175 - (AF.6144) - 7/IV/1 A.C. - COSSONCOURT

MEPHISTO

Total en service / Totaal in dienst 90
Fox VI R : 24 — Fox VI C : 54
Fox VIII : 12



CARACTERISTIQUES

Envergure	11,560	m
Longueur	9,370	m
Hauteur	3,343	m
Surface alaire		m^2
Poids à vide	1670	kg
Poids total	2450	kg
Essence 87 octanes	380	l
Huile	55	l

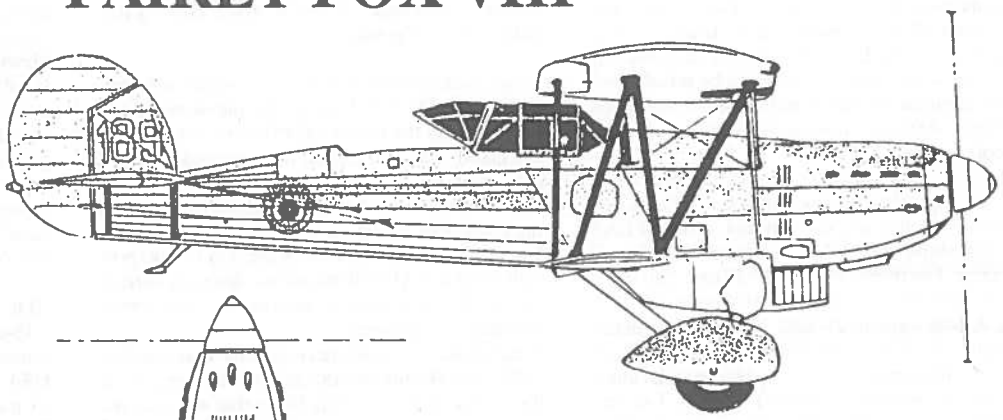
IMMATRICULATIONS

FOX VI R & VI C : 0100 à 0181
FOX VIII : 0182 à 0193
FOX "spéciaux Zurich : 0172, 0173, 0174

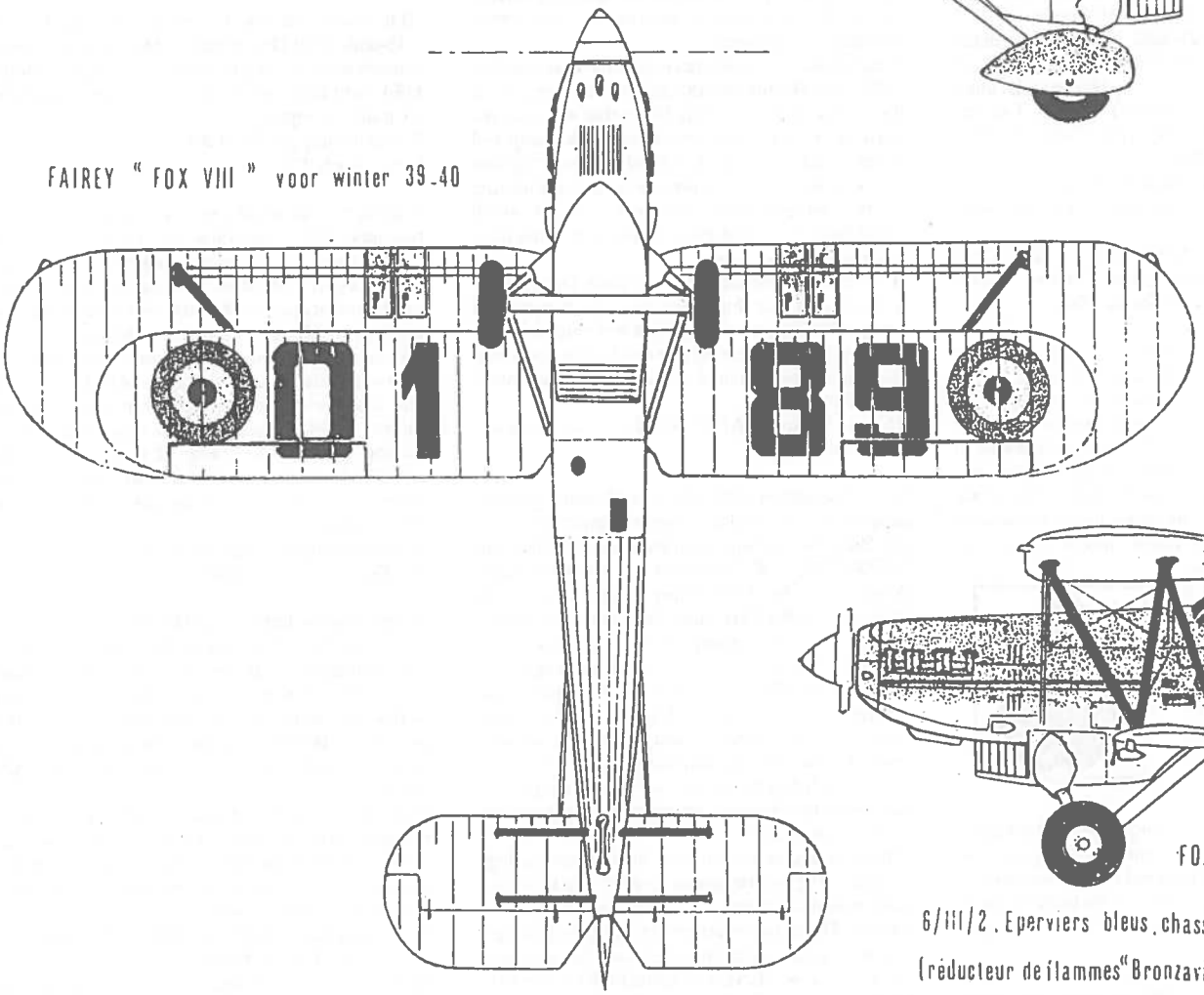
KLEUR / COULEUR
kaki eiglans / kaki semi-mat

MOTEUR : 1 Hispano - Suiza, 12 cylindres en ligne de : 860 pk/ch

FAIREY FOX VIII

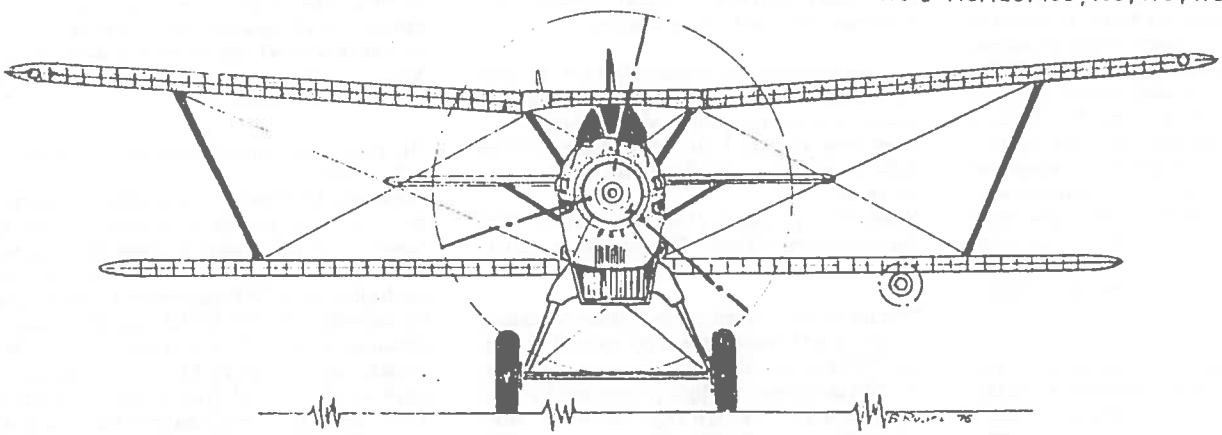


FAIREY " FOX VIII " voor winter 39-40



FOX VI C , O-123

6/III/2 . Eperviers bleus . chasse de nuit (réducteur de flammes "Bronzavia") _ Autres avions O-118, 126, 138, 139, 178, 179



"I've recently had a chance to look over some ex-Mozambique aircraft at Syferfontien, south of Johannesburg. These aircraft, 12 T-6, 3 Do.27, and 2 Alouette III, were purchased by Brain Zeederburg. Two of the Harvards were in an airworthy state; one was retained by Brian to be refurbished in Mozambique markings and the other was given to South African Airways for their Technical School.
"All other aircraft are ex-Portuguese Air Force and carry Portuguese markings, both the early large and the later small sizes, overpainted with MPLAF (Mozambique People's Liberation Air Force) markings. The three Dornier Do.27 are: 2201 werk nr. 27-1003-241 Do-27a 1958; 3424 werk nr. 2138 1962; & 3448 werk nr. 27-1003-233 1958. One of the Alouattes is SE3160 s/n 1581 no.9305 10/1/74. (I could not find any construction plate or serial number on the second Alouette.) The 12 T-6 are: 1672/3101; 1681; 1727; 1730; 1731;1736;1748; 1751; 1753; 1754; 1780; & 1788.
"Some DC-3 were also purchased, but transportation difficulties were encountered and they were sold for scrap."
Colin A. Burgess (SAFCH #402), "The Goat Houses", 43 African Street, The Gardens, Johannesburg 2192, Republic of South Africa.

"Here are some correction to the Vampire page in SAFO #57. **RSwAF**: F13 used the Vampire F.I (RSwAF designation J 28A) only from 1946 to 1951. The national insignia were carried in 6 positions, not 4. (No RSwAF aircraft of any type has, to my knowledge, been without insignia below the wings.) The unit insignia shown is that of F11, which never used the J 28A. The badge for F13 looked as enclosed. Colors are: shield yellow, chair red, clothes blue, axe white.



There should also be a 65-mm high registration number in black on the booms just in front of the fin. Alas, the number of this particular aircraft is not known, but was in the 28001 to 28070 range. (Source: Kontakt #59)
RNoAF: This is actually a Vampire F.III of B Flight, 331 Squadron, June 1949. National insignia were carried in 6 positions. The serial P43459 was carried in small black characters on the fin bullet fairing. (Source: Photo and caption in the book "Fra Spitfire to F-16".)
Aviacion Militar Dominicana: The AMD Vampire F.Is were serialed 2701 to 2725; the serial "37002" is most unlikely to have been used. Both serial and national insignia on the boom should be somewhat smaller than shown. National insignia were carried in four positions, as in the USAF. The top right and bottom left wing carried the serial number. The colors of the Caza-Bombardero badge varied somewhat, but the most common combination on the Vampire was: background blue-green; surround same colors as national insignia; insect red with light-grey wings and black details; bomb yellow. (Sources: several color slides.)
Leif Hellstrom (SAFCH #786), Servitutsvagen 3, S-145 59 Norsborg, Sweden.

"Here are some additions to the Latvian article that appeared in SAFO #56. The number of aircraft obtained were: 12 Bulldog IIs, probably 9 U-12b, 3 Hinds; the Svenska Aero HE4 was used from 1926, one Svenska Aero Pirat from 1929 and one built under license in 1932."
Lennart Andersson (SAFCH #68), Tiundagatan 52B, S-76230 Uppsala, Sweden.

"One quick correction to my letter which was published in SAFO #57. I referred to the carrier in our task group as the RANDOLPH when in fact it was the ESSEX. I knew this all the time and at least I gave the correct designation, CVS-9. (The RANDOLPH was CVS-15.) I am enclosing a photo of the ESSEX in waters just south of the Bay of Pigs. Note the presence of A-4's on the flight deck (possibly from VA-34) which were not normally carried on a CVS. S2F Trackers and HS1 helicopters were the usual complement.
"The last sentence suffered in editing. In saying that CVS-9 was 50 miles south, and by inference, part of the large amphibious Task Force that was over the horizon. In fact, it was part of our task group and much closer to Cuba. As edited, my meaning was lost, as it was the entire task force that was waiting for the call that never came, not our CVS which could have, even with its A-4 squadron, done little to change the outcome.
"Incidentally, it would shock the State Department to learn that our ship's landing party temporarily occupied a Cuban island (which was named Isla de Los Angels or something like that) when, following the fighting, we searched for survivors in the waters around the bay."
Thomas Nelson (SAFCH #980), 337 E. Third St., Hinsdale, IL 60521.

"On 3 December 1990, the New Zealand government at last decided to commit support forces to the Gulf. Two 40 Squadron Hercules, NZ7001 and NZ7002, left on 20 December and arrived in Saudi Arabia on the 23rd. They began operations alongside an RAF Hercules detachment at Riyadh on the 27th. In January an Army medical team followed aboard NZ7003 which subsequently stayed in the Gulf while one of the original pair returned to New Zealand. A further medical team from all three services and additional air and ground crews for the Hercules brought the total number of NZ personnel to over 100. As the ground war began the Hercules were assigned to the medical evacuation role.
"These Hercules retain their normal camouflage scheme of grey/grey-green overall, with low-vis Kiwi roundels in four positions and vertical fin flashes. The serial numbers on the rear fuselage, last two on the nose, and the lower fuselage title ROYAL NEW ZEALAND AIR FORCE are all in black."
Paul Adams (SAFCH #773), 81 Ponsonby Rd., Ponsonby, Auckland 7, New Zealand.

"I've lost the name and address of a SAFO member in Michigan before I could answer his letter. He wishes to exchange photos and I would like to re-establish contact. I can obtain photos of both military and civil aircraft. Please ask him to contact me again."
Yoshihiro Aoyama (SAFCH #551), 3022 Shimotoyoura, Azuchi, Gamon, Shiga, 521-13 Japan.

"The the two-part article on the Malayan Volunteer Air Force in FlyPast magazine (October & November 1990) lists the MVAF Disposition on 1 December 1941 as follows: 'A' Flight (Singapore) 6 DH-60 Moths, 3 Avro Crickets, 3 Tiger Moths, one Moth Minor (VR-SBE or F), one Whitney Straight (VR-SBB), and one Hornet Moth VR-SAN); 'B' Flight (Singapore) 2 Dragon Rapides (VR-SAV and W) and one Dragonfly (VR-SAX); 'C' Flight (Kuala Lumpur) 2 Tiger Moths, one Leopard Moth, one Hawk Major, and one Miles Falcon (likely VH-RAP); 'D' Flight (Ipoh) 2 Avro Cadets (VR-RAK and L) and one Gipsy Avro (VR-RAJ); and 'E' Flight (Penang) 5 Moth Majors and one BA Eagle (VR-SAP). Aircraft acquired later include one Avro Tutor and 2 Tiger Moths (one of which was reported to have been a Queen Bee)."
Ron Snook (SAFCH #1030), 11715 Vashon Hwy SW, Vashon, WA 98070.

"Bill Shenk can kiss the money he sent for the 1/48-scale Bird Dog goodbye. My friend who owns a hobby shop in Long Beach informs me that Model USA went belly-up and the molds were bought by a Chinese company."
Wayne Denny (SAFCH #422), 5113 Gaviota Ave., Long Beach, CA 90807.

"I thought you would enjoy the enclosed slides of two new AC-47 gunships for El Salvador. The aircraft were photographed at Kelly AFB, Texas, on 18 August 1990 while awaiting delivery. I talked to several people at the base but none could, or would, provide information on the aircraft. Perhaps one of our readers has more information.
"I have a limited number of these AC-47 slides for sale along with other slides from the 'small air forces'. SAFCH members can request a current catalog; there is no charge if they mention the SAFCH. I am also looking for Staff Photographers from outside the US who can take quality slides of military aircraft."
Werner Hartman (SAFCH #872), 4793 Le Roy St., San Bernardino, CA 92404.

"Regarding the letter in SAFO #57 seeking confirmation of the colors carried by Argentine Ducks: The assumption that they were the same as those used by the US Navy is correct. The Argentine Navy of that era (in more ways than one) emulated the practices of the US Navy. By the way, it is not strictly correct to call these 'Ducks' since this was a US service name.
"I've not so much as had a word from anyone in response to the request in SAFO #55 for help with our (Leif Hellstrom and I) B-26 project. This rather surprises me considering the usual enthusiastic response of SAFO readers."
Dan Hagedorn (SAFCH #394), PO Box 682, Centreville, VA 22020-0682.
[Editor's note: I'm also surprised (about the response to the B-26 project, not by the comments about the 'Duck'). Maybe the note wasn't displayed prominently enough. How about it! Let get out that information about small-air-force B-26 Invaders. You can count on Dan and Leif to put together a fantastic SAFO article.]

"Here are some notes collected during a recent visit to Thailand:
"**Thailand Air Force**: (1) According to reports in the local press published in early January, the Soviet Union has offered to supply the Thais with MiG-29s to be paid for in rice and other Thai foodstuffs. The RTAF was reported to be considering the offer. (2) The RTAF is in the process of obtaining 6 more F-16s in addition to the 18 it already has. (3) The RTAF has recently taken a small number of IAI Aravas into its inventory. These serve (in overall light grey finish) with 404
(Continued on page 59.)

MIG DECALCOMANIA

Model-Aire International

[The following descriptions and drawings are reprinted from the instruction sheet of the Model-Aire International decals reviewed elsewhere in this issue. Only the small-air-force schemes are reproduced here. This information is reprinted with the kind permision of Model-Aire International.]

(a) **Bangladesh**, MiG-21MF '201': Supplied to Bangladesh by China, this aircraft is overall natural metal. The radomes are all Deep green, Methuen 28F7, a little darker than FS 14097. Green roundels with red centers appear in six positions and the fin flash with red disk forward is on both sides of the fin. Black numbers '201' and '7201' appear on both sides of the nose and fin respectively. The aircraft was photographed during a public display carrying no external stores. Ref. #1 p138 bw ph; #2 p25 bw ph; #14 p20 c ph.

(b) **EAST GERMANY**, MiG-21MF '425': The camouflage is Dark Green (FS 34108, M26E6) and Medium Brown (FS 30117, M 7E6) on the upper surfaces and Light Blue (FS 35466, M 23A4) on the undersurfaces. The radomes are Deep Green, and the exhaust area is a burnt natural metal. The red '425' is carried on both sides of the nose. The national insignia appears in six locations. References show this aircraft with a centerline tank, atoll missiles on the inboard pylons, and rocket pods on the outboard pylons. Ref. #7 p92, #8 p185, #13 p248, all c drw; #1 f.c., #2 p17, r.c, #6 p966, #18 p1, all c ph of similar a/c.

(c) **EGYPT**, MiG-21RF '8506': The camouflage is Sand (FS 23594, M 4B4). Medium Green (FS 34227, M 26E4), and Dark Olive (FS 34087, M 344087) uppersurfaces and Light Blue (more Azure than FS 35550, M 23A3) undersurfaces. the radomes are all Deep Green, the exhaust area is burnt natural metal. The Egyptian roundel is carried in four wing locations and the Egyptian flag on both sides of the fin. Black Arabic numerals 8506 are on both sides of the nose. Photos show the aircraft carrying atoll missiles on the inboard pylons. Ref. #3 p21 c ph; #15 p166, p168 bw & c ph.

(d) **EGYPT**, MiG-21MF '8460': The color scheme is similar to "C", except the radomes are a Bright Green (FS 14187, M 29C"9"). Larger black Arabic numeral '8460' appear with a red unit insignia on both sides of the nose. No stores are shown in the photos. Ref. #1 p114 c ph; #10 p72 c ph; #11 p152 bw & c ph.

(e) **EGYPT**, MiG-21MF '8454': The uppersurfaces camouflaged in patches of Medium Green on overall Sand and the undersurfaces are Light Blue. The radomes are Deep Green and the exhaust area is burnt natural metal. the high-visibility panels on the wings, spine, and tail are probably Orange (FS 22510, M 7A8) outlined in black. It is believed their purpose is to avoid confusion during operations in neighboring states. The national insignia are as scheme (C). Black Arabic numerals '8454' and a unit insignia are on both sides of the nose. No external stores were on this aircraft at the time of the photograph. Ref. #12 p34 bw ph; #17 p60 c ph of similar a/c.

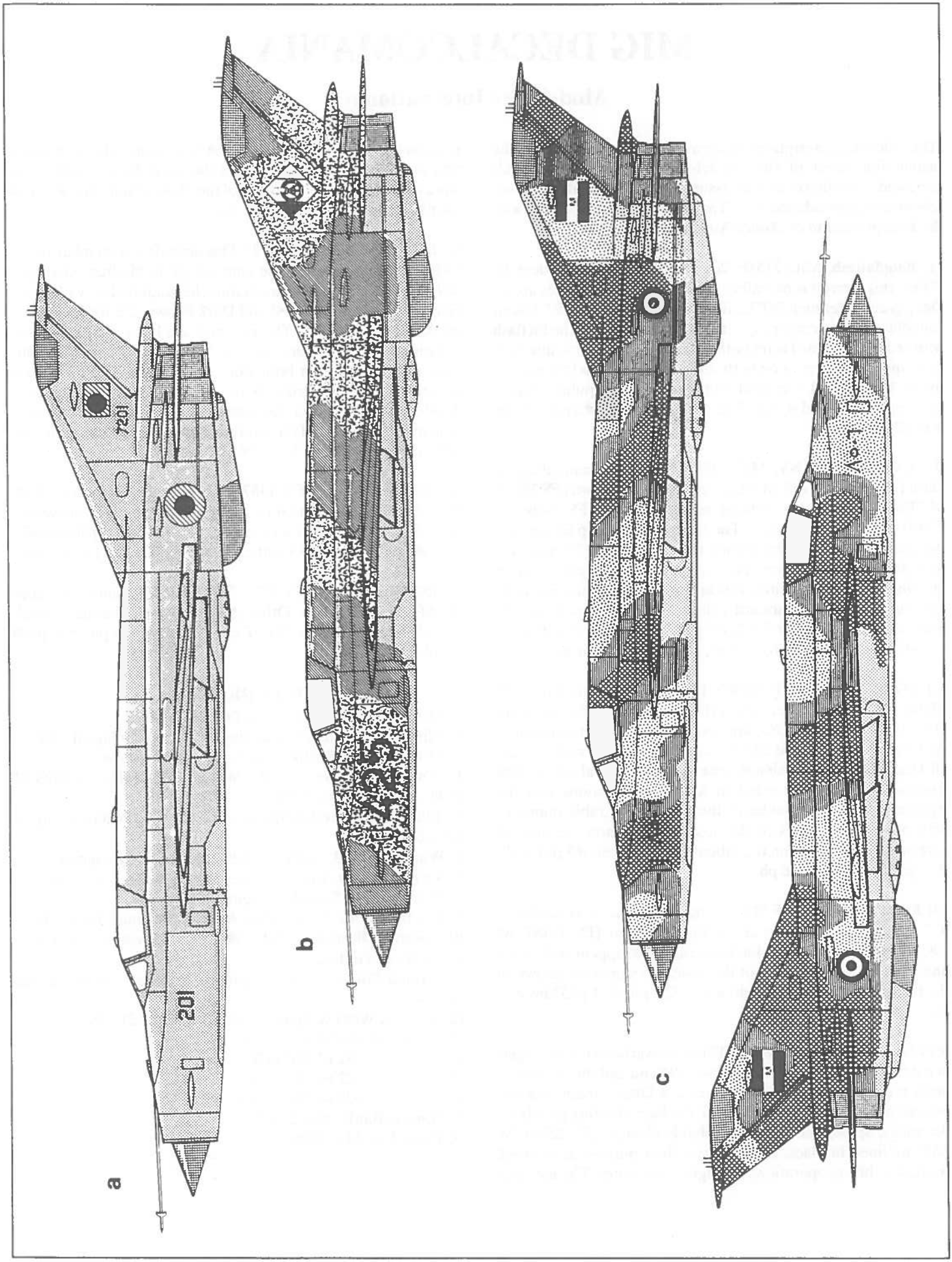
(f) **INDIA**, MiG-21M 'C1852': This aircraft is a member of the IAF No. 37 Squadron. The camouflage is Medium Grey (FS 36440, M 1C1) overall, including the undersides, with Dark Green (FS 14056, M 26F8) and Dark Brown (FS 10080, M 6F5) on the upper surfaces. The radomes are Deep Green and the exhaust area is burnt natural metal. The Indian roundel is in four wing positions and on both sides of the nose. The fin flash is presented green forward on both sides of the fin. The black serial 'C1852' on the fin and the panther unit insignia on the nose appear on both sides of the aircraft. References show the aircraft with a centerline tank. Ref: #9 p12 c drw.

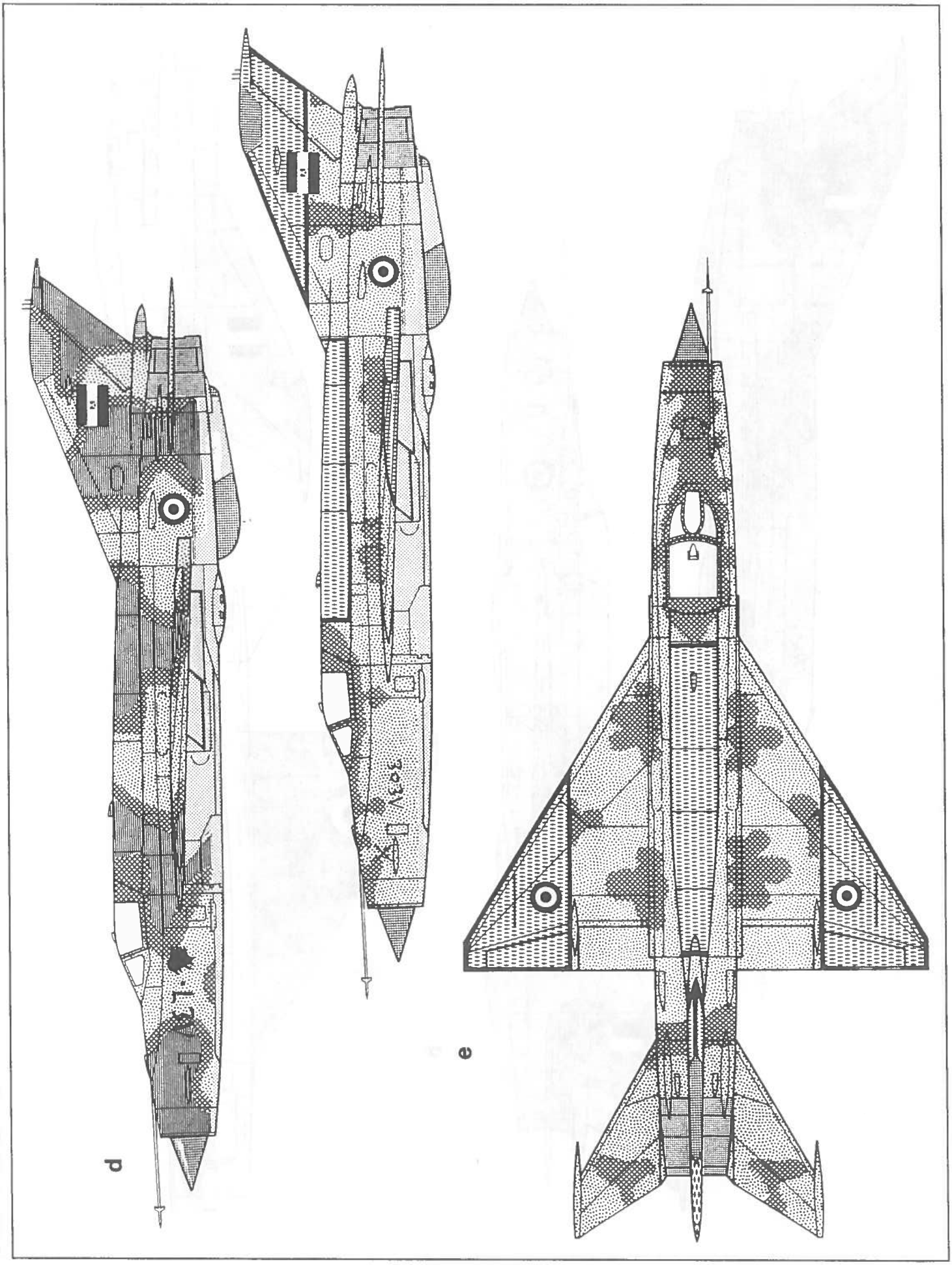
(g) **INDIA**, MiG-21MF 'C1487': This aircraft, a member of IAF No. 7 Squadron, is similar to scheme "F". One photo shows the aircraft carrying long fuel tanks on the outboard pylons only. Ref: #1 p147 bw ph; #9 p40 c ph; #16 p278. p280 bw & c ph.

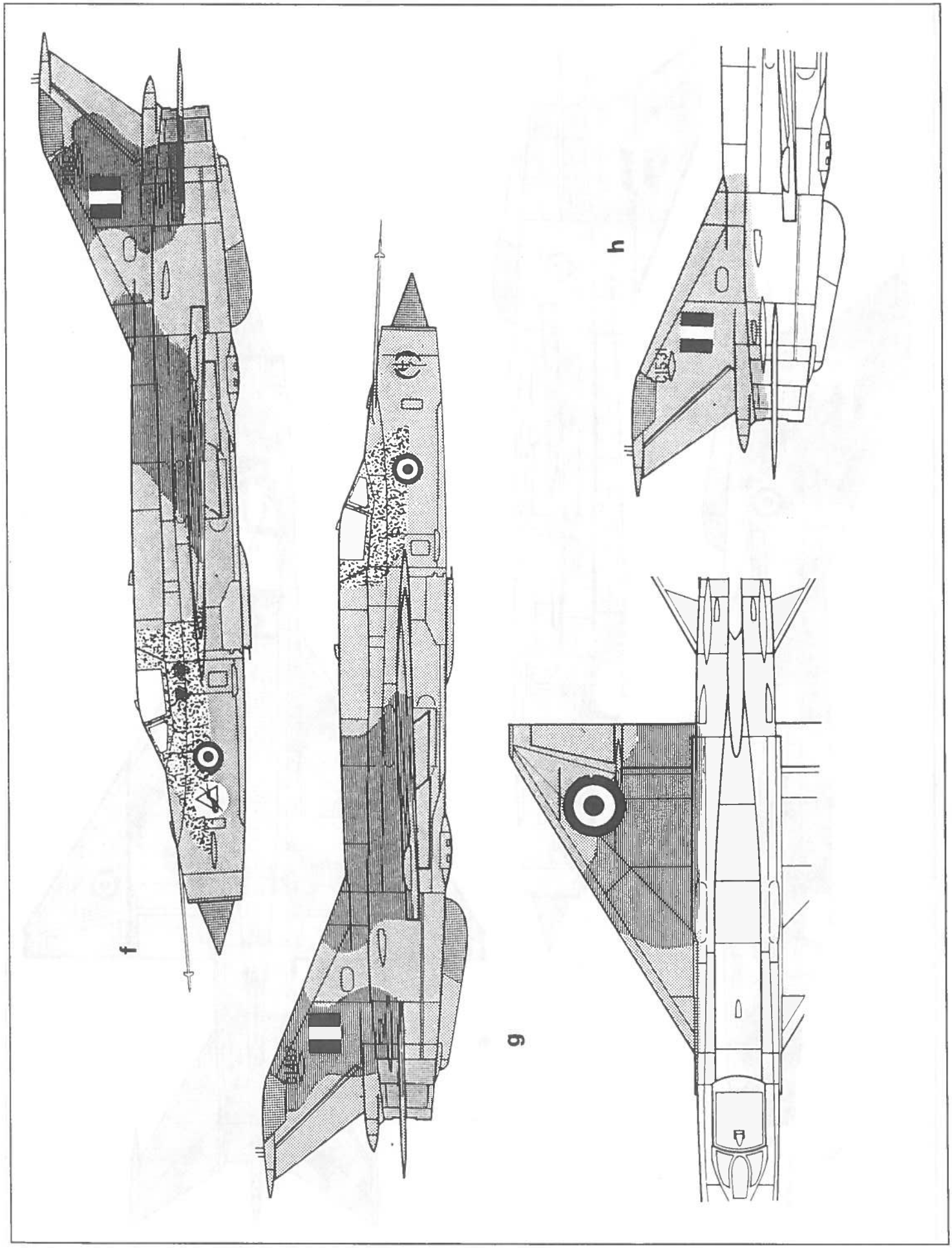
(h) **INDIA**, MiG-21MF 'C1531': This aircraft is another member of IAF No. 7 Squadron. Other than being overall natural metal, it is identical to scheme "G". Ref: #W1 p143 bw ph; #16 p280 bw ph.

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a
201
7201
b
c




f
g
h

SADAT'S AIR FORCE

Larry Auten

"The sight of our planes was beautiful. We watched more than 200 fighter-bombers with the insignia of the Egyptian Air Force breaking the sound barrier over our head; streaming with precision towards their targets in the heart of the Sinai. No one can appreciate the importance of air power in desert warfare except those who had fought in the 1956 and 1967 battles when our forces were compelled to fight in the open at the mercy of enemy aircraft." General Yussef Arifi, Commander 19th Infantry Division. (1)

For the Arab nations, the years between June 1967 and October 1973 were years of humiliation, economic hardship, and a long and costly war of attrition. On 28 September 1970, President Nasser died. He was succeeded by Anwar el Sadat who would launch a sincere effort to move the peace process forward which came to nothing, The Israelis thought they could have territory and peace too. They believed that the Arabs would eventually settle on their terms. It was a period of euphoria in Israel. Ariel Sharon would write in "Yediot Aharanot" in July 1973: "Israel is now a military super power. All the forces of Western Europe combined are less than we possess. In one week Israel could conquer the whole region between Khartoum, Bagdad, and Algeria." (13)

By late 1971, Sadat began to see that it would take another Middle-East war to force the Great Powers and the United Nations to bring about any kind of a Peace Settlement. Sadat would latter note 30 November 1972 as the day on which he decided to go to war.

In that same month, General Ahmed Ismail Ali became Commander in Chief of the Egyptian armed forces and Minister of War. Ismail would give an accurate assessment of the enemy. "My appraisal was that Israel possessed four advantages: Its air superiority, its technical skill, its efficient training, and its reliance on quick aid from the United States." Better than anyone else, Ismail understood the relationship between war and politics, the war would have to be fought in full knowledge that the Super Powers would prevent a complete military victory by either side.

On 31 January 1973, the armed forces of Egypt and Syria were placed under a unified command. Sadat worked to mobilize the resources of the Arab League and all members pledged financial and/or military support.

Lt. General Saad el Shazly would be the man who would mastermind the crossing of the Suez Canal and the successful assault on the formidable Bar Lev Line. A thick belt of SAM and mobile anti-aircraft guns would be the main line of defense against IAF attack. The EAF would support the offensive. "I wanted the enemy's ground forces to taste the psychological impact of our air force, while I wanted to preserve it from air combat. I was convinced that unless we deployed the air force in a cautious and calculated way, we would lose it for the third time; this time in the air."

After the 1967 disaster, the EAF command structure was reorganized. An intensive program of pilot, technician, and ground staff training was put into place. Twenty new air fields were built and new runways were added to the old ones. Concrete shelters were built for each aircraft. Special teams were trained for bomb disposal and air-field repair.

Air Vice Marshal Mubarak took command of the EAF in 1972. Mubarak would push his men hard. Dummy air fields and installations were attacked. After the raids, Mubarak would fly in to assess the effectiveness of the strikes. Egypt would still have a pilot shortage and many war planes would have to remain in storage. Over 200 MiG-21, 100 MiG-17, 80 Su-7 & Su-20, 50 Il-28 & Tu-16 bombers, and over 100 helicopters would be available for combat on 6 October.

The attack would fall on Tom Kippur. The Secretary-General of the Arab league would later state "In the final analysis, the Arab action was justifiable, moral, and valid under Article 51 of the Charter of the United Nations. There was no aggression, no attempt to acquire new territory. To restore and liberate occupied territories is the duty of all self-respecting peoples." (14)

One can not help but wonder why Israeli military intelligence did not pick up on the Arab military buildup. While deception played a part, the main reason was that the Israelis believed that no attack would be launched until the EAF was as strong as the Israeli Air Force. This would not occur until at least two more years or longer. Henry Kissinger was of the opinion that no Arab attack would be forthcoming. He predicted that if such an attack was launched, Israel would make a "knock-out" punch within 48 hours. (9)

On the afternoon of 6 October 1973, 220 jets and 100 Mi-8 helicopters struck Israeli installations in the Sinai: air fields, command posts, long-range artillery positions, Hawk missile batteries, ECM centers, and vehicle parks. Rocket-propelled "concrete dibbler" bombs were dropped on Israeli air fields. Mil Mi-8 helicopters landed commando teams to destroy oil field and disrupt the flow of reinforcements to the front. By last light, some 80,000 men were across the canal for the loss of 208 killed. On the 7th, the IAF attacked the missile belt and EAF air bases in the Nile Delta. The EAF put up 60 interceptors to meet the attack. These IAF raids did little damage. these air fields were attacked again on the 8th and 9th and then these attacks were broken off completely and Port Said became a major target for the IAF. Egyptian fighters, missiles, and guns would claim 28 enemy aircraft over Port Said during the war.

After establishing a firm bridgehead across the Canal, the Egyptian army fought off the Israeli counter attacks while the EAF continued to strike at Israeli positions. Iraqi Hawker Hunters had flown along side the EAF from the start of the war, Libya would send Mirage III, and Algerian Su-7 joined in ground support missions.

By the 9th, with both sides were suffering a critical loss of material, both the Soviet Union and the USA would launch major resupply efforts for their respective clients. On the 9th, the Egyptian army moved the missile belt forward. Air activity was limited that day on the Sinai front.

At this time, major tank and air battles were fought on the Golan Heights. The Syrian advance had been stopped and the Israelis had launched fierce counter attacks. At great cost the Golan Heights were retaken and Syria invaded. Iraqi and Jordanian

forces came to Syria's aid. The government of Egypt came under great pressure to come to Syria's aid. A decision was made to advance beyond the missile belt and attack the Israeli armor. The attack was launched on the 14th. Over 260 tanks were lost for minimal Israeli losses. The badly battered force returned to the bridgehead that evening.

On the 15th, the Israelis began a massive counter attack. On the early hours of the 16th, the Israelis crossed over to the west bank of the Canal. The EAF resisted with all it had: Tu-16s bombed the enemy from high level, L-29 Delfin trainers and helicopters were pressed into ground attack missions, and MiGs fought desperate battles overhead. Still the Israeli advance could not be stopped.

Many EAF pilots believed that Americans were now flying with the EAF. The Israelis could not have had enough experience to employ the new ECM and smart weapons being supplied by Washington. (16,17) A small number of North Korean and Pakistani pilots did fly with the EAF. Several victories were scored by Pakistani pilots.

On 22 October, the UN Security Council passed Resolution 338 calling for a cease fire that same evening. This was rejected by the Israelis. The Third Egyptian Army was now completely encircled. The EAF made a heroic attempt to protect it from constant air and ground attacks. At 1700 hours on the 24th, a second cease fire finally came into effect.

In 18 days of combat, the EAF had flown over 6000 sorties. Over 200 jets and helicopters had been last. The EAF had downed numerous aircraft and inflicted heavy casualties on Israeli ground forces.

In early 1973, "Newsweek" magazine had called the EAF a low-profile air force. The gallant men of Sadat's air force had proved them wrong.

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AERO MAGAZIN, published by 'Air Press' Publishing Co., Airport Portoroz, YU-66333 Secovlje, Yugoslavia. US $32.00 per years (six issues).

It's always a pleasure to receive a nicely produced new modeling magazine from outside the US. This new Yugoslav magazine is exceptionally well done. It's as nice as FineScale Modeler, and quite similar to Flugzeug Magazin from Germany. It costs about as much as one of the British modeling magazines. Full color covers and center section, along with English summaries and photo captions enhance the Yugoslav text and extensive photo coverage. The October 1990 issue features the F-84G Thunderjet in Yugoslav Air Force service. Clear black & white pictures of the natural metal and camouflage schemes are complimented by excellent color 3-views and side views, with colors keyed to FS595 (near to my heart!). A recap of available F-84E/G kits is included.

Extensive photo coverage of the Yak-3 in Yugoslav and Soviet service comes next. An interesting variety of markings are evident. 1/72 five-view drawings and color-scheme layouts show the salient details. Again, available kits are surveyed, but unfortunately no English translation is provided.

The full color center section spotlights the SOKO Super Galeb G-4s of the Yugoslav Air Force aerial demonstration team, 'Letece Zvezde'.

Technical particulars and 1/48 plans detail the Rogorzarski Brucos (Freshman) primary trainer aircraft of 1939. Looking much like an elongated PT-19, the Brucos lost the YAF flyoff to the Aero 2 and never entered production. Oddball scratch builders will enjoy the article and plans for a 1/48 Samogradnja UTVA-75 light aircraft.

A photo showcase of several nicely detailed models, an article about constructing model carrying cases, and kit reviews (no English translations) round out this issue.

While the subject matter is mostly Yugoslavian (tres understandable), this is more than just another oddball foreign modeling magazine. If it is to be successful over time - and they're off to a great start - the editorial team will have to expand to non-Yugoslav subjects. [Editor's note: Bite your tongue, David. But, I am afraid you're right.] I have every expectation they'll do it well: I've already paid for my subscription!

David H. Klaus (SAFCH #891), 3404 Ramsgate Terrace, Alexandria, VA 22309-2142.

"The 'expensive' Yugoslav journal 'Yuvan-Aeroplan' has changed it name to **'Aero Magazin'** as of issue 5 of 1990 and is now 48-52 pages with heavier stock paper - covers at least! [Editor's note: See review above.]

"5/90 Front cover: color side-views of Douglas DC-6B of Adria Airways, Hurricane, and 'Zucenko'. Twelve-page article including 5 pages of drawings on the Dornier Wal. Six-page article on the pre-war VTOL aircraft 'Zucenko'. Four-page article on 353 Squadron RAF and its modern Yugoslav successors. Color center-spread on the Dornier Wal plus color side-views of Harvard, Spitfire Vc (2 schemes), Adria Airways DC-6B (3 schemes), and the early aircraft 'Saric no.2'. Two-page article on pioneer airman Ivan Saric. Six-page article on the DC-6B. Four-page article on modeling the Aero-3 plus 3 color side-views on the inside back cover. English summary. Rear cover has a color photo of the 'Saric no.2' in the Yugoslav Museum.

"By the way, I've obtained a copy of 'Os Avioes da Cruz da Cristo', which was reviewed in SAFO #56, from The Aviation Bookshop, 656 Holloway Rd., London N19 3PD. They have it in stock and the cost is about 30 pounds."

Tony Morris, Ashbourne House, Marsh Gibbon, Bicester, Oxon OX6 0HW England.

"I would like to inform our readers of a new Polish magazine. This high-quality monthly magazine, **Lotnictwo: Aviation International**, is printed on first-class paper with glossy covers. In many ways it resembles AIRFRAME, the new magazine from Britain.

"The first issue consists of no less than 80 pages plus covers and a 1991 calendar with color photographs of aircraft in Polish aviation museums. The main articles in this first issue are: An in-depth study of the new Polish trainer, the PZL I-22, with plenty of color photos, 1/48-scale drawings, cutaway view, and cockpit details. An article on the good-will visit of the Swedish Air Force to Poland with many color photos of Polish Su-20 and Su-22. A large article on the air forces operating over the Persian Gulf. Articles on the MiG-31, SR-71, F-117A, and PZL 105 Flamingo. An article on an air show in Czechoslovakia with many color photos of Czech aircraft including the MiG-29. Lots of news on second-generation Fulcrums, new Yugoslav aircraft, newly-delivered Polish Fulcrums, new PZL-230 Scorpion, etc. The civil aviation section describes the new Warsaw airport. A modelers corner contains a how-to article on making instrument panels from photographs, a set of color detail shots of the F-18 Hornet, and a description of the new AERO decals. An Aircraft Album section consists of brief information and one photo on 12 different aircraft types. And more!

"This is really exciting reading, but in Polish. It is likely that following issues will have an English supplement. The price is 15,000 zl (about US $1.60) in Poland, but US $4.00 abroad. This makes an exchange agreement look quite attractive."

Wojciech Butrycz (SAFCH #981), ul. Facimiech 12A m.25, 30-667 Krakow, Poland.

(Continued from page 52.)
Squadron. (4) At least one RTAF OV-10 has shed its USAF-style South-East-Asia camouflage and is now light grey overall. (5) The RTAF still has at least 7 C-47s on strength, 6 in SEA camouflage (one minus engines) and one in white & silver; these belong to 603 Squadron at Don Muang. (6) At least one RTAF T-28 is still airworthy, apparently being used as a 'station hack' at Chiang Mai. (These last items are from personal observation in mid-February 1991.)

"**Thailand Navy**: (1) The Thai Navy has ordered a helicopter carrier from Germany; delivery to be 'in the middle of the decade'. (2) Dornier Do-228s have been ordered by the Navy with first deliveries expected 'this year'.

"**Thailand Army**: (1) The Thai Army took delivery of 4 Bell AH-1S helicopters (serials 9996 to 9999) in November.

"**Burma**: From reported in the Thai press (27/12/90 and 11/2/91), Burma has purchased a large amount of arms from China, including 12 F-6s and 12 F-7s. Burmese pilots are currently being trained for them in China. The package also includes tanks, APCs, artillery pieces, and patrol boats. How Burma is paying for these is something of a mystery, as its foreign currency reserves are considered to be extremely low - possibly down to only $100 million.

"**Laos**: During a short break in Laos, I was able to get some more information on Lao MiG-21s (see sketch in SAFO #41). A photo in the 'Museum of the Lao Revolution' shows a line-up of Lao MiG-21s, possibly during the official hand-over ceremony from the Vietnamese AF. Five '21s are shown, numbers 01, 07, and 14 are PFMs and numbers 16 and 18 are MFs. (MiGs 01 to 15 are PMFs, 16 upwards, to at least 25, are MFs.) Color scheme is very dull natural metal or light grey overall (I would, if pressed, tend to the light grey) with national markings as in the above mentioned sketch. These aircraft have since received an upper-surface camouflage scheme of earth and green, the green being quite a bright medium shade. This was seen on photos of 02 on the front of a Lao magazine. Only the nose of the aircraft was shown, so I can't say anything about the other markings. The codes remain red and the undersurfaces are light grey. No MiGs were seen while flying out of Vientiane-Wattay airport, only 4 Mi-8s, one Mi-6 (extremely stripped down), and a clutch of Lao Aviation aircraft. These comprised 5 An-24s, 2 Chinese Y-12 (registration RDPL 34116 and 34117), and 2 Boeing 737s newly leased by Lao Aviation, for which the crews are still undergoing training. When these are in service, along with some of the as yet undelivered ATR-42s, the An-24s will be retired.

"That's all for now, except for a small question: I recently obtained photos showing 4 derelict Skyraiders at Long Beach in 1979. The source states that the aircraft, A-1E serial 132683 and A-1Hs serials 135332, 139606, and 139665, are ex-Cambodian AF. Bob Mikesh's book on the South Vietnam AF, 'Flying Dragons', shows that these A-1Hs were delivered to South Vietnam. All 4 machines are in standard SEA camouflage with no markings or even signs of markings having been erased, except for the serials in white at the base of the fin and a white triangle with 'striking-cobra' insignia at the top of the fin. No such insignia is illustrated in 'Flying Dragons'. I should add that all 4 aircraft lack outer wing panels, so there's no way of knowing about wing markings. Can anyone comment on a possible Cambodian connection?"

John MacGregor (SAFCH #766), 13 Foggyley Gardens, Dundee, DD2 3LG Scotland.

THE KOPPEL REPORT

Recent changes in aircraft markings

Eastern Europe:

(1) Romania: As a follow-up to previous comments/queries in SAFO, our member in Bucharest, Ovidu Man, has provided some interesting details. Foremost is the date of adoption of the pre-WWII Romanian roundel in place of the red star with small roundel superimposed: 23 August 1984, more than five years prior to the abolition (by bloody revolution) of the Romanian Socialist Republic on 27 December 1989. Mr. Man points out that the original roundel, dating from 1915 to 21 June 1941, was reinstated on 3 September 1944 and used until shortly after the Communists took power on 30 December 1947 and put their red star on everything. Mr. Man also provided a b&w photo of MiG-15UTI '2404' taken in 1985 and bearing a large roundel on its fin. A sketch to show the relative positioning of the markings is presented herein. It might also be worth noting that the November 1990 issue of AIR FORCES MONTHLY carried color photos of Romanian MiG-23UB '23'.

(2) Hungarian Republic: Although this nation ceased to be the Hungarian People's Republic on 23 October 1989, it continued to use the Communist red star with a small roundel superimposed on all its military aircraft. On 3 July 1990, the Hungarian Parliament voted to accept the revision of the national coat of arms; although I have not yet seen an illustration of the change, one may safely assume that the deletion of the red star is an important part of the change. However, an international airshow at Keckemet AFB on 19 August 1990 featured Hungarian AF aircraft with the red star insignia still applied (as evidenced by a series of photos in a recent issue of AIR COMBAT magazine). Now our member in Budapest, Tadeusz Dobrowiecki, reports that he has seen a newspaper item mentioning a return to the 1938 markings for military aircraft, although no further details were given. Furthermore, Tadeusz has learned from a second-hand source, that a temporary revision of the national marking had been applied to three Mi-8P helicopters for the the autumn-1990 visit of the Papal legate to Hungary. The red star insignia was replaced by a red and white ring containing a red, white, and green 'chevron' triangle.

Near East

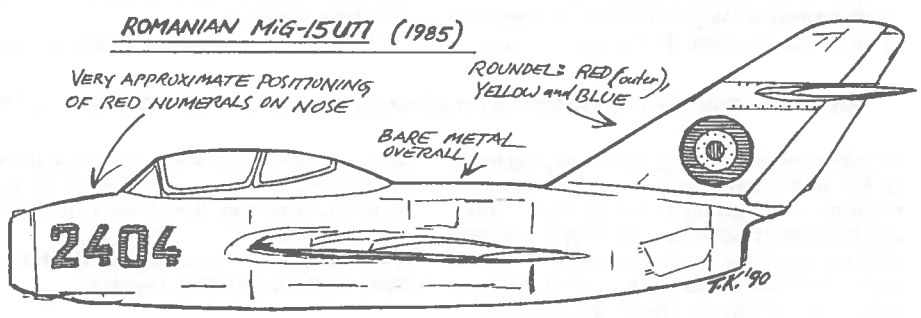
(1) Emirate of Kuwait (in exile): After the 2 August 1990 invasion of Kuwait by Iraq, elements of the Kuwaiti AF that managed to escape to Saudi Arabia added the legend FREE KUWAIT to the sides of their aircraft. The first indication of this was on television news programs, perhaps in October (I've misplaced my notes). These showed the large, stencil lettering in red on camouflaged Skyhawks. Subsequent reports showed that the lettering had been changed to black, in stencil or solid styles. First photos featuring the Skyhawks with black lettering appeared in early January 1991 (**Soldier of Fortune** magazine, with a color shot of Skyhawk '822') and in the fourth week of January (**Time** magazine, depicting a line-up of at least nine Skyhawks including '813', '814', and '816', plus in a different photo in February of '817'). Has anyone seen photos with FREE KUWAIT in red letters (or does anyone know the approximate date and on which aircraft this 'temporary' identification was instituted)? The Associated Press has reported that on the day after the Iraqi invasion, the following Kuwaiti AF aircraft made it to Saudi Arabia: 15 Mirage F1s, 20 A-4 Skyhawks, 6 Hawks, and 15 Gazelles.

(2) Republic of Yemen: With the merger on 22 May 1990 of North and South Yemen (the Yemen Arab Republic and the People's Democratic Republic of Yemen, respectively), alteration of their flags and other national emblems was unavoidable. Reports indicate the adoption of the Arab Republic flag, but without the single green star; so it is possible that the aircraft marking could be likewise altered, making it even more similar to Egypt's than before. Photographic proof is still awaited, but it seems quite likely that the People's Democratic Republic's distinctive blue triangle with small red star is no more.

Africa

Republic of Benin: On 1 August 1990 the People's Republic of Benin followed the East Europe/Soviet Republics trend by changing the name of their country and rejecting the flag (and, consequently, the aircraft emblem) of the small red star on green, which had been based on that of the People's Revolutionary Party which had gained power on 1 December 1975. Does anyone know is the previous Republic of Dahomey colors have been reinstated, or is there an entirely new design?"

Ted Koppel (SAFCH #118), 3520 North Rolling Rd., Baltimore, MD 21207-2202.



YUGOSLAV AIR FORCE P-38L LIGHTNING

(This article has been adapted from an article by D. Frka and M. Micevski which appeared in the the magazine **Aeroplan** 3/90. It is reprinted here with permission from the publisher, AIR PRESS d.o.o., Yugoslavia.)

One day in early April 1945, a P-38L-5-LO of the 14th Fighter Group, 15th Air Force, USAAF, was damaged by anti-aircraft fire during an escort mission over Austria. When it became clear that he could not reach his base in Italy, the pilot landed in Yugoslavia. He came down at the Sombor airfield, which was then occupied by the 421st Attack Wing and the 111th Fighter WIng of Yugoslav Army Aviation. The pilot returned to Italy, but his aircraft remained behind in Yugoslav hands. When Soviet troops showed an interest in the aircraft and declared their intention to have it flown back to Russia, the Yugoslavs removed one of the main wheels 'for repair' until the Soviets had moved on to another base.

The P-38 was test flown for the first time on 19 May 1945, by 2nd LT Radovan Dakovic of the 111th Fighter WIng. Two days later it was transferred to Skopoje. The P-38 was flown sporadically during 1945 and made only a few flights in 1946. Due to lack of spare parts, it was dismantled and handed over to the Technical University in Belgrade. In the early 1970s, some surviving fuselage and wing sections were transferred to the Yugoslav Air and Space Museum in Belgrade, where they are currently in storage.

On arrival at Sombor, the P-38 was finished in a natural metal with standard Olive Drab antiglare panels on the nose and inner sides of the cowls. The tail had bands in white with red borders. The spinners were red. The numbers "1" and "181" were in black. At first the Yugoslavs simply painted the white stars in the US insignia with red, but later standard Yugoslav national insignia were painted on the aircraft.

The drawing shows the first and second Yugoslav paint schemes. [Editor's note: Page 1 of the original drawings shows the original USAAF scheme and has, therefore, been left out. Although left in its original language, the text on the drawings should be self-explanatory.]

Leif Hellstrom (SAFCH #786), Servitutsvagen 3, S-145 59 Norsborg, Sweden.

[Author's note: Starting with the October 1990 issue, **Aeroplan** has been renamed **Aero Magazin**. The issues I have seen have all been highly interesting and usually include two or three long articles on aircraft in Yugoslav service, accompanied by lots of photos and excellent drawings. There are English photo captions and good English summaries for most article. Lately, six pages of photos and drawings in color have been added. Each issue consists of 40-50 pages and there are six issues a year. Subscription rates very depending on country of destination; for the USA it is $32 by surface mail, while the UK it is £ 20. For details write: Air Press d.o.o., Airport Potoroz, YU-66333 Secovlje, Yugoslavia.]

SELECTED BIBLIOGRAPHY ON YUGOSLAVIA AVIATION

Gustav Ajdic and Zoran Jerin, Letalstvo in Slovenci, Vol. 2, 224 p., Ljubljana 1990. (History of Slovenian Aviation 1918-41; English & German summary).

- B. Cijan, Vazduhoplovno jedrilicarstvo, 534 p., 1949. (Work on gliding, contains about 20 pages on indigenous Yugoslavian gliders and sailplanes.)
- Danko Divic, 50 godina 'Ikarusa', 46 p., Zemun 1973. (History of 'Ikarus' works at Zemun, including 12 pages on aviation activities and listing of all aircraft built.)
- Diverse authors, Cuvari naseg neba, 476 p., Beograd 1977. (Yugoslavian AF; history, equipment, photos.)
- Radmio P. Givkovitch, Almanah jugoslovenskog vazduhoplovstva, Beograd 1932-41 (pre-war periodical).
- Radmio P. Givkovitch, L'Aeronautique Yougoslave, 150 p., 1935. (French work on Yugoslavian aviation.)
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- ITA (Institut de Transport Aerien), L'Aviation Civile en Yougoslavie (note de travail No. 325), 52 p., 1959. (Study on civil aviation in Yugoslavia, including route-maps and airline service. Published also in English "Civil Aviation in Yugoslavia".)
- C. Janic and R. Radosavljevic, 55 godina jugoslovenskog vazduhoplovstva, 95 p., Beograd 1966. (Pictorial history 55 years in Yugoslavian aviation, also English edition.)
- C. Janic, Pioniri jugoslovenskog vazduhoplovstva, 1970/71 (Yugoslav aviation pioneers.)
- Bogoljub Jovanovic, Almanah jugoslovenske avijacije, Beograd 1930. (Pre-war periodical.)
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- S. Rape, Nasa krila 1908-30, Ljubljana 1930. (Our wings 1908-30.)
- Sandi Sitar, Letalstvo in Slovenci, Vol. 1, 445 p., Ljubljana 1985. (History of aviation in Slovenia; English summary.)
- Zarko Sivcev, Apercu de l'Histoire du Trafic Aerien Yougoslave 1923-84, 13 p. (Manuscript in French.)
- Borislav Vasic, Avioni jugoslovanskog neba, 64 p., Beograd 1987. (Booklet on indigenous military aircraft types, mostly 1945-87, including projects.)
- J. Zupancic, Critice o zrakoplovstvu in aviatiki, Ljubljana 1911. (General)

Yugoslav Aviation Magazines

- Aero Magazin (earlier YuVam bilten, then Aeroplan), bimonthly on aviation history and modeling, since October 1990.
- Aerosvet/Aerosvet International (English edition published sporadically since 1989.)
- Krila, monthly, general, since 1970.
- Krila Armije, Glasnik RV i PVO, military aviation magazine.
- Nasa Krila, monthly pre-war magazine.

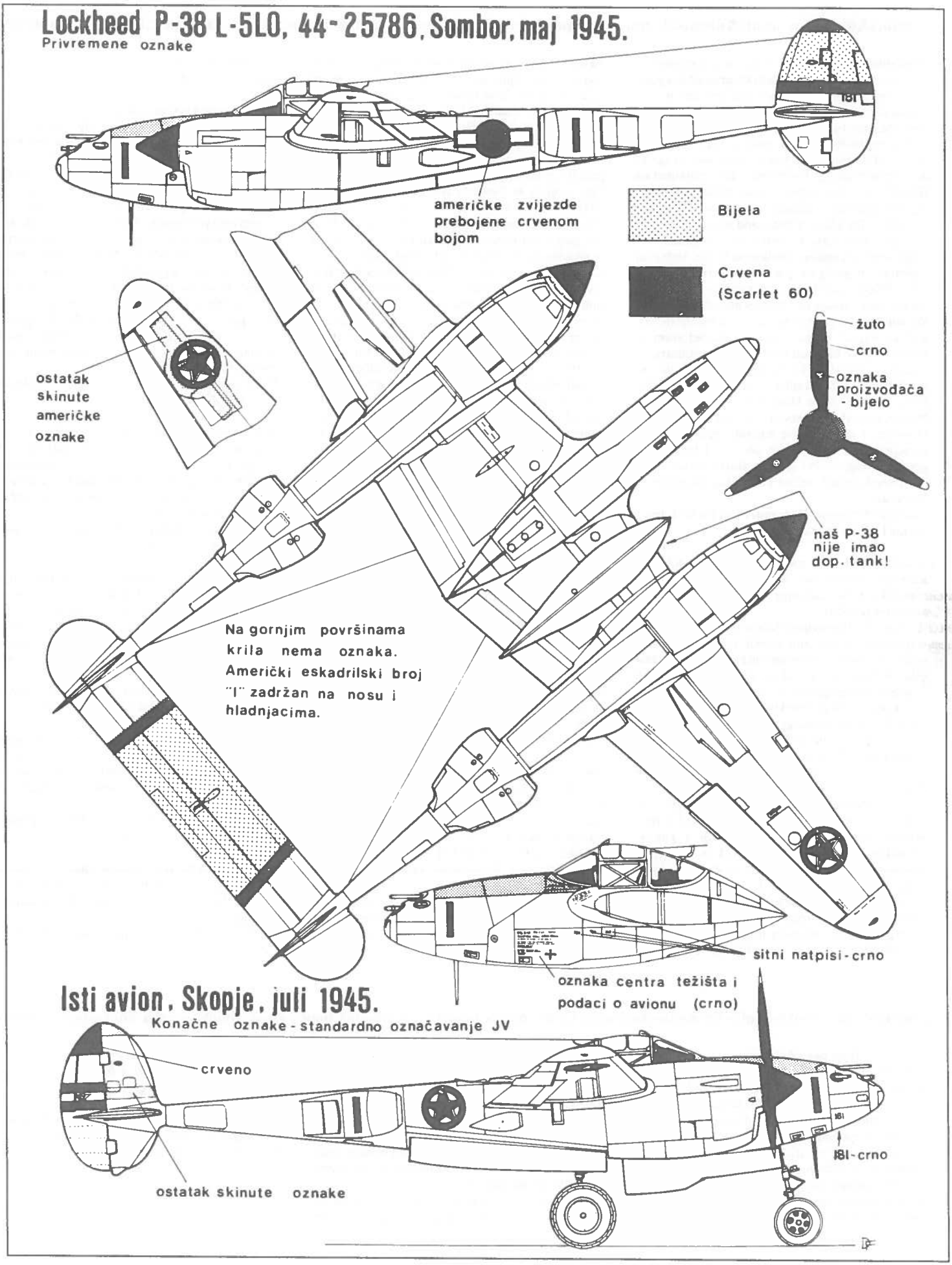
Martin Fricke, Rothstr. 23, 8057 Zurich, Switzerland.

-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-

"A SAFCH member in Bulgaria is attempting to set up kit production, but is facing considerable problems - mainly getting hold of the plastic! However, in his latest letter he sent me the enclosed tyres (and wheels) for the Spitfire and asked me to forward them to the SAFCH with a note that he can supply similar sets for the MiG-9, MiG-15, MiG-17, P-39, Il-2, Yak-1, Po-2, I-16, etc. He is very obviously keen to make contact with modelers in the West. His name and address are: Cvetelin D. Ivanov, Studenski Grad "Chr. Botev", Sofia 1100, b.35 v.'B' r.811, Bulgaria.."

Tony Morris, Ashbourne House, Marsh Gibbon, Bicester, Oxon OX6 0HW England.

[Editor's note: The Spitfire set consists of a small spru of plastic with two hubs for the main wheels with inserts, a hub for the tail wheel, and rubber(?) tires for the main wheels and tail wheel. The detail on the flash-free plastic is sharp and appears to be accurate. The tyres have tread and no flash. The sets for the larger aircraft, such as the Il-2, must be impressive. Can anybody help Cvetelin find plastic; his kits could be very exciting.]


Lockheed P-38 L-5LO, 44-25786, Sombor, maj 1945.
Privremene oznake
181
američke zvijezde prebojene crvenom bojom
Bijela
Crvena (Scarlet 60)
ostatak skinute američke oznake
žuto
crno
oznaka proizvođača - bijelo
naš P-38 nije imao dop. tank!
Na gornjim površinama krila nema oznaka. Američki eskadrilski broj "I" zadržan na nosu i hladnjacima.
sitni natpisi - crno
oznaka centra težišta i podaci o avionu (crno)
Isti avion, Skopje, juli 1945.
Konačne oznake - standardno označavanje JV
crveno
181
181 - crno
ostatak skinute oznake

-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-

"**Modelism** magazine has been very successful. I sold 256,000 copies of the 260,000 printed last year. However, the price of paper and printing is now almost six time more than before, so I have had to raise the price by 250%. If I raise it any more, it will be too expensive for our readers. The only possibility of keeping the price down was to go to desktop publishing. Therefore, I have obtained an IBM PS2 and the software to do desktop publishing. This purchase was necessary, but now I have no money left for a laser printer and scanner.
"Do you know some individual or foundation that might help a magazine dedicated to the technical education of young people? Also, financial help of about $3000 would be enough carry us through the for the next 6 issues of 32 pages and 50,000 copies. We will also be accepting foreign advertisements, and we expect to soon open a model shop in Bucharest; the first and only one in the country.
"Since we are allies in the Gulf, I would like to publish some photographs of the F-117, F-14, F-15, F-18, and the Oliver Hazard Perry, Ticonderoga, Nimitz, and other classes of ships used in the Gulf. However, I do not have suitable photos. Could someone help me get such photos? I have some good drawings of the Arleigh Burke escort class, but I need photos before publishing an article in Modelism."
Christin Craciunoiu, Bucuresti Piata Presei Libre 1 Sector 1, 79784 Romania.

"I am interested in cooperating on the SAFCH Research Project on the Aerospatiale Gazelle, especially if the exchange of color slides of this aircraft is possible.
"I would also like to introduce our readers to some magazines, books, and decals from Yugoslavia which are available from me via exchange. (1) **Glasnik rv i Pvo** is the official Air Force magazine with 72 pages. This magazine is not in common distribution, but it can be ordered by civilians. It is all in the Serbo-Croatian language including the captions. Each issue contains a monograph on a modern military aircraft including a cutaway drawing. It is bimonthly and is available for $22.00. (2) **Aero Magazin** is the new name for **Aeroplane** and **Yuvam Bilten** which has already been described to SAFO readers. This is available for $32.50. (3) **Jets, Mlazni Avioni Zapadnog Porekla u Jugoslovenskom Naoruzanju 1953-1974**, is a recently published booklet on jet planes of Western origin in the Yugoslav Air Force. It describes the T-33, F-84G, and F-86E. There are 4 color pages with ten color profiles and three more on the back of the cover pages. It has 40 pages in A4 format and over 100 b&w photos. It is available for $16.00. (4) **Letalstvo in Slovenci od Prve do Druge Svetovne Vojne** by G. Ajdic and Z. Jerin is a book about aviation in Slovenia between the two wars. This books is the result of long years of research. It includes English and German captions. There are over 100 b&w photos on 224 pages in hard binding. While the history of civil aviation is the main subject, there are important sections on original aviation projects in Slovenia and the events of April 1941. Unfortunately,it is a limited edition which results in a rather high price of $60.00. (5) **Krila** is the only other regularly printed aviation magazine in present-day Yugoslavia. The modeling section is dedicated to airplanes in Yugoslav markings. It is also published bimonthly. The price for 1991 is still unknown, but it should be around $30.00.
"A year ago, a set of four decal sheets was issued under the name **Yumo**. A limited number of these decals are available. The price is $4.50 for one or $16.00 for the set of four. #1 Yugoslav AF markings 1950-1989; 40 cockards in 1/72 scale. #2 Yugoslav AF tail flag and small stars in 1/72 scale. #3 Yugoslav AF numbers 1950-1989; white squadron and evidence numbers in 1/72 scale. #4 Same as #3 except in black.
"I am also looking for photographs and detail drawings of the Aero 35. Perhaps one of our Czech readers can help. I am also working on an article on the Hanriot H.145, H.320, and H.41 which were used in Yugoslavia and Poland; Polish readers are especially invited to help. Data on the Raab Katzenstein aircraft would also be very welcome. I have lots of photographs of Yugoslav planes and lots of copies of original photos from WWII which are available for exchange."
Mitja Marusko (SAFCH #944), Trzaska 48, 61000 Ljubljana, Yugoslavia.

"I have been working on the history of the Arab air forces for many years and I am now in the process of putting together all the information gathered. I hope to find a publisher who will be willing to issue my book in the future. I am in need of the following: (1) photos of any aircraft, past and present, which saw service with any Arab air force; and (2) correspondence with any SAFO member interested in the same subject. I have a large collection of military aircraft photos and slides which I can exchange for photos of Arab aircraft."
Charles Stafrace (SAFCH #886), "L-Gharix", Emm. Attard St., St. Venera, Malta.

"I am looking for information and slides of the Pilatus P-3, PC-6 Porter, PC-7 Turbo Trainer, and PC-9 from all over the world. Can any SAFO readers help?
Christoph Kugler (SAFCH #1151), 8126 Zumikkon, Switzerland.

"I'm interested in scale aircraft drawings of all types. I collect, trade, and buy plans. My modeling interests are biplanes, racers, prototypes & experimentals, pre-WWII airliners, floatplanes & flying boats, autogyros, and record setters of all types. I need pen pals in Hungary, Yugoslavia, Turkey, Sweden, Finland, Holland, Spain, and Austria. I would be glad to help with your research projects. One of the small US companies is working on a 1/72-scale, injection-molded kit of the Macchi M.5. However, for the decals, they need a good photo or illustration of the aircraft flown by Ensign Hammann when he won the first Medal of Honor for an airman. Also, they need photos of the M.5 with the Sea Dragon and the inscription "I CASI SONO DUE" on the fuselage. If anybody can help, please send the information to me and I'll pass it on."
Joseph Gian Francesco (SAFCH 836), 630 Bloomfield Ave., Verona, NJ 07044.

"I'm gathering information on the aircraft, markings, etc. of both combatants of the civil wars in the Congo. The only information I have now appeared in "Aircraft and Airwars" and the ESCI decals of doubtful accuracy. I'll reimburse expenses and give credit to all who assist."
Rod Thorsen (SAFCH #967), 2405 1/2 S. Eye St., Bakersfield, CA 93304.

"I am at present gathering information on the Balkan Wars 1911-1913. I have a fair amount of information, but photos (and therefore drawings of markings) are nil. Can anyone help? This will be submitted to SAFO when ready. I'm also interested in doing something on the Chaco War. Does anyone want to cooperate on such a project?"
John Cochrane (SAFCH #905), 6 Bonnington Ave., Crosby, Liverpool, L23 7YJ England.

"DISPOSAL: Complete set of "Aircraft in Profile": eleven bound volumes and 3 volumes punched for loose-leaf binders (252 aircraft in total). Also, "Air Classics" from 1977 to present. Send SASE with your bid to:"
Burt Leake (SAFCH #665), 4291 Larchwood Place, Riverside, CA 92506.

"I have about 50 unpublished photos of German and Soviet aircraft from the Eastern Front during WWII. Is anyone interested in exchanging photographs?"
Robert Michulec, ul. Gaiewska 17/81, 81-047 Gdynia, Poland.

-books-books-books-books-books-books-books-books-books-books-books-books-books-books-books-books-books-books-

(Continued from page 40.)
THE AIR FORCES OF THE WORLD, by William Green and John Fricker, Macdonald & Co, 1958. 28.5 cm by 22 cm, 336 pages, hardbound, 500 + b/w photos, nine pages of national insignia in color, countless maps and tables.
OK, so this isn't exactly hot off the presses, but chances are that there are many SAFCH members who have missed out on this classic. For truly this book defines the meaning of 'classic'. The text gives a good summary of the history of each military air arm in the world as it stood in the late 1950s, illustrating each country with a selection of good photos of currently operated aircraft, many of which were never seen in print before or since. Even though later research has proven some of the statements in the book wrong or incomplete, it still remains a gold mine for anyone interested in small air forces, and is undoubtedly the best single source available on the subject.
It can still be found in second-hand book shops, so, if you don't already have a copy, make sure to get hold of one as soon as you can.
Leif Hellstrom (SAFCH #786), Servitutsvagen 3, S-145 59 Norsborg, Sweden.

SVENSKA FLYGPLAN by Lennart Andersson. 228 pages 24 cm by 17 cm, 325 illustrations, many production lists, English summary.

MAGISTERS FOR BIAFRA

Of the eighteen Fouga CM-170R Magisters received by the Austrian Air Force between February 1959 and July 1963, the five oldest, with at least 1,000 flight hours on them, were sold to a private dealer in mid-May 1968. The disassembled Magisters were transferred from Zeltweg to the Graz-Thalerhof airport where they were loaded into a transport plane and flown to Portugal.

The British firm "Cooney Contractors" was given as the purchaser. but turned out to be a dummy firm intended to obscure the real destination of the planes. The Magisters had been taken to Portugal for transshipment to war-torn Biafra. This fictitious firm was dissolved immediately after the conclusion of the transaction.

Biafra had been fighting for its independence from Nigeria since 1966. In 1969 it had lost its only port and supplies and weapons now had to be flown in. Transport flights usually originated in Lisbon and followed a route to the islands of Fernando Poo or Soa Tome near the West African coast, a distance of at least 6,500 km. From there the transports went at night to a landing site in the bush. These flights were flow at night to avoid Nigerian air attacks.

On 23 May, a Lockheed L1049H Super Constellation, fictitiously registered under the Mauretanian flag as 5T-TAC, carried two fuselages of the Austrian magisters (c/n 199 and 212) from Lisbon to Sao Tome. On 2 June the Super Connie carried out a second flight from Lisbon carrying the wings of the two planes, ammunition, and two passengers. The two passengers were forced to disembark at an intermediate landing site in Bissau (Portuguese Guinea) because of "hydraulic problems" and they had to continue their flight on a different plane. The next night, 5T-TAC still carrying it precious cargo, exploded at Sao Tome. Sabotage by one of its crew members is suspected since it is said he soon cashed a $US 56,000 check.

The two Magisters could not be reassembled without their wings and the fuselages were left at the Sao Tome airport. After more than twenty years these fuselages are still lying there among other wrecks from the time of the air bridge.

AUSTRIAN MAGISTERS FOR BIAFRA

c/n	d/n	Luftwaffe	Fate
192	4D-YD	AA+283	Lisbon
193	4D-YE	AA+284	Lisbon
199	4D-YF	AA+290 EC+396 93+19	Sao Tome
200	4D-YG	AA+291	Lisbon
212	4D-YI	AA+299	Sao Tome

[Extracted and translated by Greta Heinz from an article "On the Fate of the Austrian Magisters" by Gottfried Holzschuh that appeared in the 2/90 issue of OFH Nachrichten. It it reprinted here with the kind permission of Osterreichischen Flugzeug Historiker.]

THE AIRCRAFT OF RUDOLF FIZIR

[Editor's note: A few months ago, John Jarrett asked what we had in the SAFCH files on the Yugoslav aircraft named Fizir. I found a photo (in L+K 10/84) of an elegant military floatbiplane captioned "Jugoslavsky ZMAJ Fizir s motoem Walter Mars 1". "The Complete Illustrated Encyclopedia of the World's Aircraft", edited by David Mondey (1978), says, "ZMAJ/Czechoslovakia (sic): Frabrica Aeroplana I Hydroplana Zmaj founded in 1927 by Jovan Petrovic to produce under license the Hanriot H-41, Gourdou-Leseurre B-3 and Dewoitine D-27 fighters. Indigenous designs included a Wright-engined observation aircraft, an observation seaplane, and the two-seat Fizir AF-2 Amphibian." I could find no more, but John didn't give up and the following are excerpts from his recent letter.] "I have been corresponding with Dr. Piotr Kasprzak (SAFCH #834) of Lodz, Poland, who, working with his friends in Yugoslavia, has come up the the following information."

John Jarrett (SAFCH #972), 17 Linsdale Gardens, Gedling, Nottingham, NG4 4GY England.

In 1925 Rudolf Fizir was working as an engineer at the Military Aircraft Workshop at Novi Sad when he designed his first aircraft, the Fizir-Maybach powered by a 260-hp Maybach engine. IN 1927, the Royal Yugoslav Air Force ordered 12 of these reconnaissance aircraft. The type also met with success on the international scene when the Belgrade-Warsaw-Belgrade race of September 1927 was won by V. Strizevski flying a Fizir-Maybach.

From 1928 to 1930, Fizir worked on a number of prototypes powered by a variety of engines (Loraine, Wright, Castor, etc.). Of these, only the Fizir-Wright was accepted for production as the Fizir FN.

At this time Fizir had his own workshops in which the Fizir-Maybach, Fizir-Vega AFZ, Fizir LAF, and Fizir-Nebojsa, and FP.1 were also constructed. Note: FN stands for Fizir Nastaun (basic trainer) and FP stands for Fizir Prelazni (transition trainer).

In 1933, Fizir worked with a team of engineers (Milutinovic, Ilic, and others) from Rogozarski on the PVT which was produced by Rogazhrski. It seems that at that time they were all employees of the Technical Department of the High Command.

The Fizir FN was the only pre-WWII Yugoslav aircraft produced in large quantities. The first series of 20 FNs were produced by Zmaj, but later many more were produced by Rogozarski; altogether these two factories produced some 170 FNs. Aeroklub (Yugoslavia) ordered the Fizir FN from Zmaj with the Walter NZ engine of 120 hp. In 1940, a new factory, Albatros at Sremska Mitrouca, produced another 20 FNs. Later in 1943, Zmaj produced an additional 10 examples for the Croatian Air Force, but these were not finished until after May 1945. Some floatplane examples also saw service.

It may seem pretty stupid to have three different factories producing the same plane, but the policy of the Yugoslav High Command was to place a contract with any factory it wished no matter who and where the plane had been designed. [Editor's note: the same was true in the USA immediately after WWI.]

The FP.2 was not developed by Fizir, but by his first engineer while he was working for Zmaj in 1939. 580 km. During the war, Partisans had three of this type. After the war, more were found and used. The exact number produced is not known. One Fizir FN is preserved in the Yugoslav Air Museum (see Aeroplan 2/89, page 14-15).

LUCHTVAARTAFDELING INVENTORY 1925-1928

Type	1924	1925			1926			1927			1928		
Nieuport XI	25			25		-25							
" XVII	5			5		-5							
Ansaldo SVA.10	1		-1										
Bristol F.2B	1		-1										
Trompenburg V.2	48			48		-48							
Fokker C.I	58		-2	56		-3	53		-8	45	+3	-7	41
" C.4	31			31		-3	28		-5	23			23
" C.5d					+16		16	+10	-1	25			25
" C.6		+19		19	+7		26	+3	-1	28	+3		31
" C.8											+1		1
" F.7a/3m											+3		3
" S.2	14		-1	13			13		-2	11			11
" S.4	15	+15		30		-2	28		-1	27			27
Total	215	+34	-6	243	+24	-86	181	+13	-20	174	+10	-7	177

Postive number are aircraft taken on charge, negative numbers are aircraft deleted, number without a sign are aircraft on charge on 31 December.

ADDITIONS

1925 Fokker C.6	590-608
" S.4	114-128
1926 Fokker C.5d	301-316
" C.6	609-61
" D.VII	271(rebuilt from spares; most likely in 1926)
1927 Fokker C.5d	317-326
" C.6	616-618
1928 Fokker C.!	(rebuilt w/o aircraft as C.! Lynz)
" C.6	619-620 & 621 (by LVA from spares)
" F.7a/3m	801-803

WRITTEN OFF

1925 Fokker C.I	511,544
" D.VII	252
" S.2	88
Old aircraft and likely many Tropenburg V.2	
1926 Fokker C.I	493,510,528
" C.4	557,565,579
1926 Fokker S.4	109,115
Remaining Trompenburg V.2 and Nieuport	
1927 Fokker C.!	485,495,497,519 (all rebuilt) 523,?,?,? (maybe some rebuilt)
" C.4	553,563,571,573,576
" C.5d	301
" C.6	614
" D.VII	264,269
" S.2	86,89
" S.4	110
1928 Fokker C.I	525 (others likely rebuilt)

During 1928, the LVA had started to rebuild C.I aircraft. The BMW engines were replaced by AS Lynx radial engines and many other modifications were applied. In all, 21 C.I were rebuilt. Part of these had already been w/o. Some of these must have been compeltly rebuilt, since Fokker supplied a number of fuselages. Some serials must have been re-used.

At the end of 1928, the LVA posessed 38 trainers and 139 warplanes. A reserve of warplanes was formed by the KLM airliners, which could be converted to bombers. The three F.7a/3m acquired in 1928 served as a nucleus for a wartime bomber squadron.

The C.5d 2-seat fighter was purchased to supplement the D.VII. The C.4 was a "heavy observation plane" and the C.6 was a "light obervation plane". In actual fact, the C.6 and C.5d differed only in their engines - 350 hp and 450 hp respectively.

The original (German) type designation with Roman numbers was used by the LVA for the C.I and D.VII only.

F. Gerdessen (SAFCH #12), Fijnscheerderdtraat 12, 4204 ES Gorinchem, The Netherlands

ORGANIZATIONAL EMBLEMS
Latin-American Air Arms

Ted Koppel

The accompanying photograph shows more selections from the Small Air Forces Collection of aviation heraldry, mostly embroidered or printed designs for a variety of units from South and Central America, including the Caribbean. They are depicted to a common scale at 42% of their true size, with the exception of the few unit metal badges which are shown in a larger size. (The additional illustrations not in the full-page photo do not necessarily conform to the above scales.)

ARGENTINA (1a) Nationality title (obsolete?) for Air Force, very pale blue-gray lettering on dark blue-gray, possibly also used for WWII volunteers with the RAF. (1b) "VII BRIGADA AEREA" (golden-yellow design on very dark blue) refers to the 7th Air Brigade, located in Buenos Aires province. The FAA emblem shown is the same as worn as a cap badge by all AF personnel. (2) Naval Aviation unit, "HELICOPTEROS", possibly one of two helicopter squadrons in the 3rd Naval Air Group. The inner shield, between a yellow crown and scroll, shows a green griffin on a white background, flanked by red and black vertical stripes, superimposed on a gray anchor, all on a bright blue outer shield. (This same design, but on a circular background rather that the shield, is illustrated in color on a camouflaged Sikorsky 'Sea King' of the 2nd Helicopter Sqdn. in Warbirds Illustrated No. 45: "Argentine Air Forces in the Falklands Conflict".)

BOLIVIA: (3) "GRUPO AEREO MIXTO / TECNICO DE CAZA", depicts a hand holding a wrench, superimposed on a silver T-33 aircraft with red wing-tip tanks, the national roundel on port wing, and "FAB" (in black) on starboard wing, all on a medium-blue shield. The Mixed Air Group title is red on a gold scroll. (4) "ESCUADRON DE SEGURIDAD / Ia COMPANIA / F.A.B. 75", shows a winged dragon in green, holding two machine guns, diving past a red lightning bolt in a pale-blue sky with a white cloud. (5) This red disc bearing a tiger's head in natural colors, reads, "7ma DIVISION AEROTRANSPORTADA / COMPAMIA TIGRES / COCHABAMBA - BOLIVIA / 83 84". Possibly an Army Airborne unit, although the FAB supposedly also formed a parachute battalion in the mid-1960s; and Cochabamba, in central Bolivia, is the site of the air base housing the Mixed Air Group, (6) The front view of a Bell "Huey" helicopter (in yellowish-tan and green camouflage), superimposed on gray wings and a black eagle, all on a blue disc, bears a darker blue border reading, "DONDE NOS NECESITEN S.A.R. / ESCUADRON BUSQUEDA Y RESCATE". (7) The image of Death (in a red hood) in a white cloud behind a winged "FAB" in a light-blue sky with five yellow stars, is surrounded by the words, "SEPTIMA COMPANIA FUSILEROS / FANTASMAS". The red border has a lower added segment in the national colors of red, yellow, and green. This emblem undoubtedly pertains to one of the FAB ground units assigned to air base defense.

BRAZIL: (8) "COMTA - ERA 32 / CARCARA" (referring to both the Air Transport Command and a Recon & Attack Squadron) and (9), showing an earlier "ERA 32" design from the 1960s, were illustrated and described by the author in SAFO #12 (Vol. 3, No. 4), April 1979, on page 131. (9a, shown separately.) This is an emblem of FAB Headquarters; and the heavy, elaborate construction of the piece (metal, silk, metallic thread, braid) probably indicates that it was worn by a very high-ranking officer.

CUBA: (10a) National title (light blue on dark blue-gray) for the former aviation branch of service, possibly also for RAF volunteers in WWII, as with Argentina. (10b) Pre-Castro emblem of the Cuban Air Corps and Cuban Army Air Force, incorporating the standard aircraft insigne with golden wings on a blue background. It was not used beyond 1959.

DOMINICAN REPUBLIC: (11) "GRUPA DE CAZA RAMFIS", also used as an aircraft emblem (most notably on F-51Ds) until the early-1960s, was discussed and illustrated by the author in the same SAFO #12 cited above. (12) Displayed on a variety of aircraft in the history of the AMD/FAD Fighter-Bomber Squadron (Vampires, F-47Ds, B-17Gs, etc.), this design has been described in different colors in other publications. Our sample features a red insect (probably a mosquito, in honor of the de Havilland aircraft delivered in 1948) with a green/red/yellow/black head (helmet?) and pale-gray wings bearing a non-standard representation of the FAD roundel. The insect is carrying a black shield with golden-yellow rim and stars, holding a yellow bomb, and firing a red projectile from a black gun. The title, "CAZA BOMBARDERO", is below in yellow, and the background is teal-blue. The outer, segmented border consists of very dark blue, white, and red concentric rings.

EL SALVADOR: Although not a part of the collection shown here, was illustrated by the author on page 16 of SAFO #4 (Vol. 1), April 1976. Included were the emblems of the FAS (on uniform and nose of C-47 aircraft) and that of the A.F. Staff.

GUATEMALA: (13, 14) Slight variations of the FAG emblem, with different wing-designs and central disc, feature the national colors of blue and white. The wings and borders are yellow.

NICARAGUA: (15) The pre-Sandanista FAN emblem, as also sometimes applied to aircraft fuselage (F-51Ds, for example). The former (and future?) national aircraft insigne, in standard colors, is flanked by golden wings on a red-bordered blue disc. "NICARAGUA" is in white, and "FAN" is red.



9a



D

PANAMA: (16a) The 1969-89 FAP shoulder title, used by both the National Guard and then the Defense Force, is red with yellow "FUERZA AEREA" and border. (16b) This similarly-obsolete FAP branch-of-service emblem was worn on the collar. The white propeller with yellow wings appeared on a white-bordered blue diamond.

PERU: (17) "GRUPO AEREO 51" is represented by a winged infant (cupid?) in white diapers and a colorful Andean cap, resting on a cloud and holding a lightning bolt and a bomb, all on a light-blue background, The partial border is red-white-red, with white lettering on a black arc at top, the lower white arc being blank. (18) This light-blue disc, also with a red-white-red border, bears a winged flaming-grenade symbol in yellow and red. "FUERZA AEREA DEL PERU / SEMAG" (meaning what?) is in black. (19) More standard symbology is used for the insigne of the FAP Communications and Electronics School: torch, lightning, electronics, wings. Within the common border and background is the name, in white, "FUERZA AEREA DEL PERU / ESCUELA DE COMUNICACIONES Y ELECTRONICA". (C. enameled metal badge.) This unidentified unit shield shows a hand holding an upright (flaming?) sword with four diagonal lightning flashes emanating and a motto, "AD MAJOREM PATRIAE GLORIAM", on a circular scroll. All elements are gold on a blue background, the whole being surmounted by a miniature gold replica of FAP qualification wings. [A further FAP unit emblem. not part of this particular collection, was illustrated and described by the author in SAFO #14 (Vol. 4, No. 2), January 1980, on page 57. It is that of "GRUPO AEREO No 6".

VENEZUELA: (20) A double-headed eagle is the emblem of "GRUPO AEREO DE BOMBARDEO No 13 / FAV", labeled in black on a white ring. The eagle, in tan and rust-brown, is holding two white bombs and has a shield bearing a bombsight on its crest. On the green background, there also appears "DISCIPLINA XXVII-VII-MCMLXI", most likely referring to a formation date of 27 July 1961. (21) This black-bordered white disc is labeled "ESCUADRON DE TRANSPORTE No 2 / F.A.V.". The inner shield is segmented into a red cross on white, a golden-brown bat(?) on green, and a white artillery piece with parachute lines on blue. (22) A similar shield, with similar colors, could be for the Grupo de Transporte or the Grupo Aerotransportado Aragua, the airborne unit which is part of the Air Force. The top half is light blue and the bottom half green, forming the background to the white aircraft and black and white parachute. (A. enameled metal badge.) The A.F. Technical School emblem is a gold, black, and white eagle and column on a black diamond, as identified by the gold lettering, "ESCUELA TECNICA / F.A.V.", on scroll. (B. enameled metal badge.) This blue shield features a gold plan-view of a Mirage aircraft and a yellow/blue/red roundel (without side-bars). The gold lettering states, "GRUPO AEREO DE CAZA No 11 / FAV". (D. enameled matal badge, shown elsewhere.) Described as the "Escudo Esmaltado Escuela Aviacion Militar", this multi-part badge has a black and silver eagle and a silver globe on a pale-blue shield. The motto, "FORTUNA/AUDACES/JUVAT", appears at the top and sides, with "ESCUELA DE AVIACION MILITAR DE VENEZUELA / 10 DE DICIEMBRE DE 1920", also in silver, along the lower green scrolls.

Note: There are also a few Mexican A.F. emblems, unfortunately mostly the "non-pictorial" variety, in this SAFC series; but perhaps we'll get to those some other time.

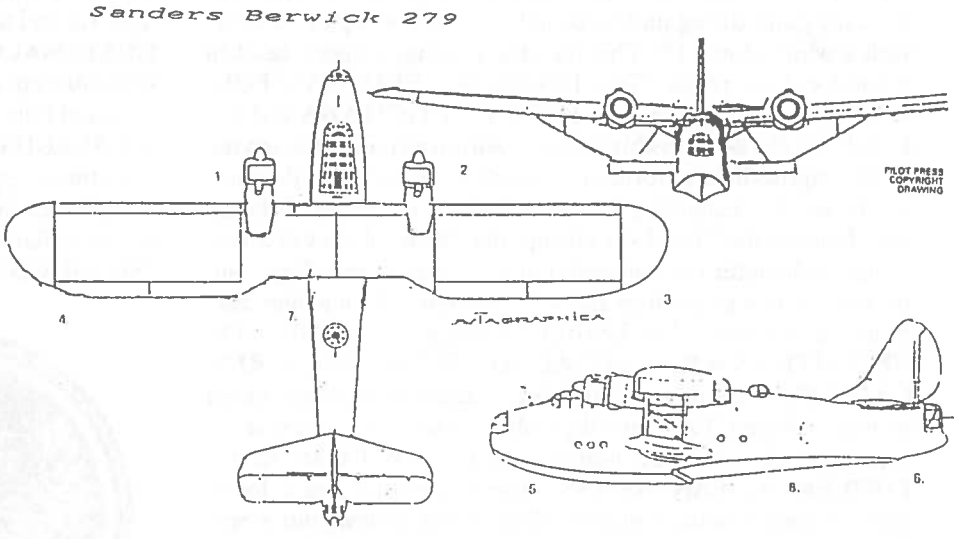
REFERENCES: Besides personal files, an excellent source for background information had been "Latin-American Military Aviation" by John M. Andrade [Midland Counties Publications, 1982], although hardly any of the insignia shown here are illustrated in the book (which does, however, show many others, including a few from SAFO).

Ted Koppel (SAFCH #118), 3520 N. Rolling Rd., Baltimore, MD 21207-2202.

NEWLY DISCOVERED AIRCRAFT

"Probably one of the most forgotten endeavors (for good reason) is a little known aircraft designed in the late thirties. The enclosed 3-view fell out of an old and musty Phineas Pinkham anthology used to prop up a sagging bookcase. I thought you might be interested, but I wouldn't risk a kit."
Martin T. O'Connor Sr. (SAFCH #774), 2441 Union St., Allentown, PA 18104.

[Editor's Note: Martin sent the following: "Designed to fill an obscure specification for an obscure military function, for an obscure air force, by an obscure aircraft designer, the Sanders Berwick was destined for obscurity. Paraguay expressed an interest in the aircraft for possible coastal patrol duties, but no orders were forthcoming. Only one example was built. Flight tests found the aircraft unstable horizontally and longitudinally as well as being difficult to fly. Refused by Mr. Smith (one brother of cough-drop fame) and Aram Sonian (the well-known Armenian investor) for display in their Washington, D.C. museum which bears their names, the Sanders Berwick 279 finished its career as a floating restaurant; 'Jean Laffite's Cajun Abalone', moored off Pacific Grove's Municipal Plung in California."]

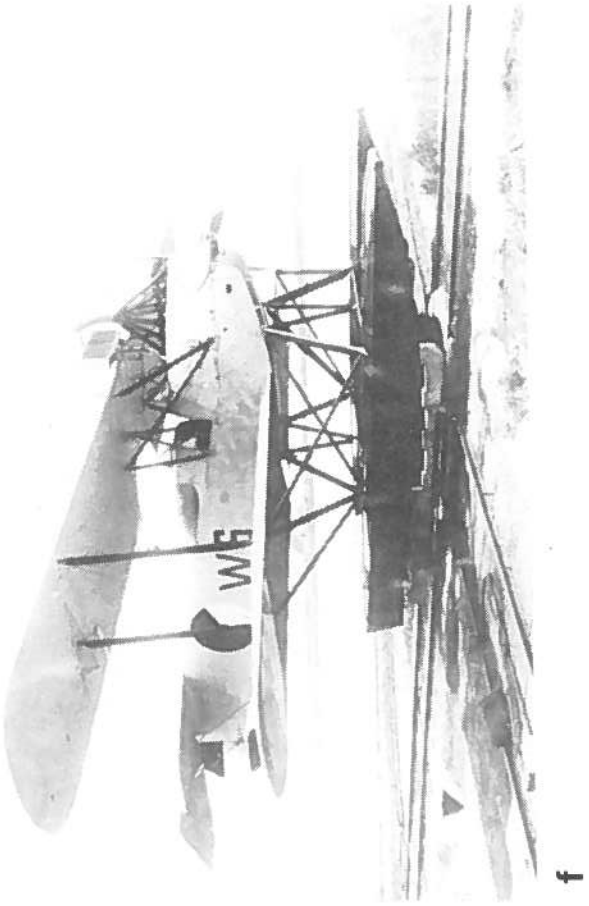


ORGANIZATIONAL EMBLEMS: Latin American Air Arms

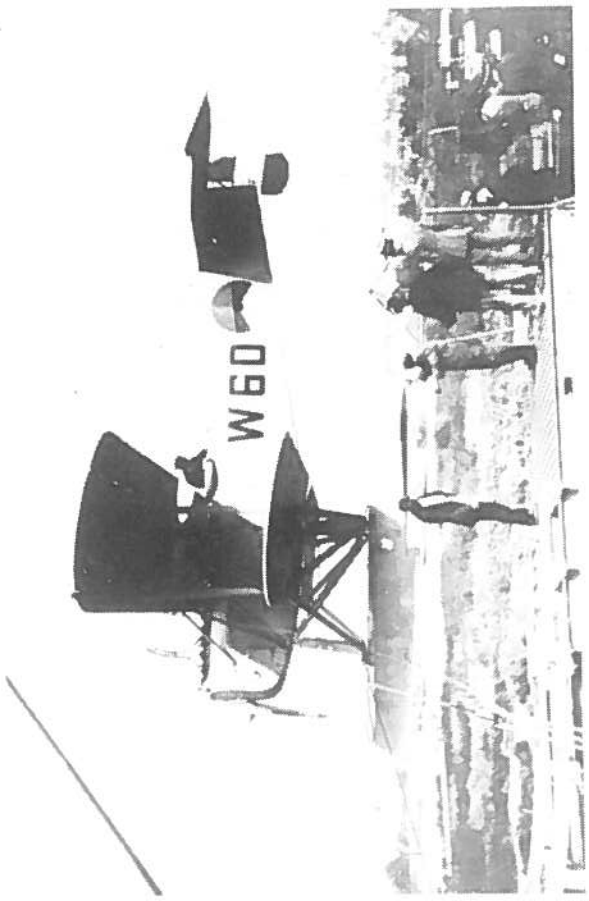


Ted Koppel/SAFC* '89

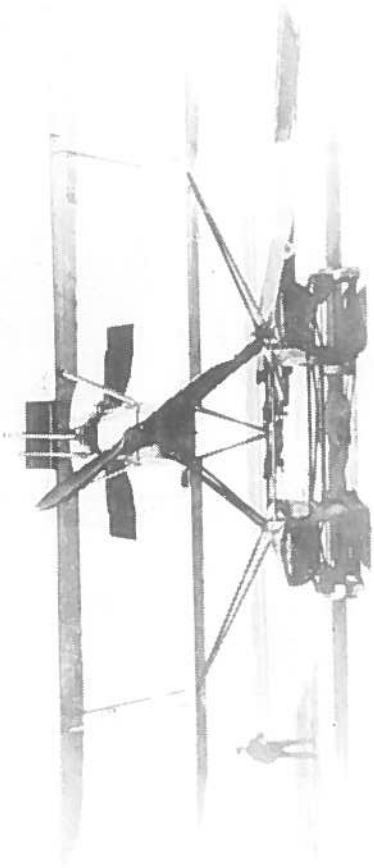
*[Small Air Forces Collector]



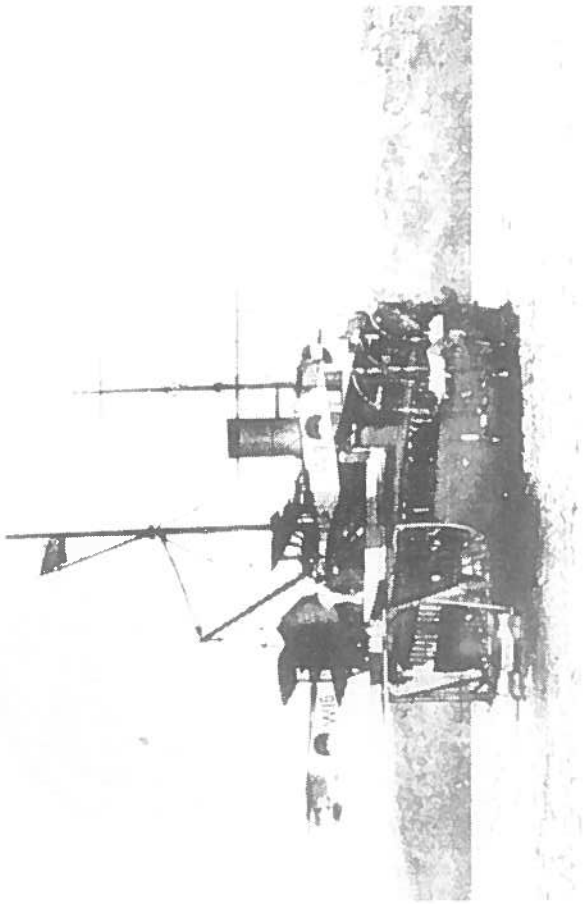
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